



**SITE ASSESSMENT REPORT
FOR
ALSIDE INC.
AKRON, SUMMIT COUNTY, OHIO
TDD: T05-9201-037
PAN: EOH0952SAA
TAT: 05-23-02023**

April 10, 1992

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EPA - REGION V

Contract Number: 68-WO-0037

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ecology and environment, inc.

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1.0 INTRODUCTION

The Ecology & Environment, Inc., Technical Assistance Team (TAT) was tasked by the United States Environmental Protection Agency (U.S. EPA) to conduct a site assessment and collect samples at the Alside, Inc., manufacturing facility, located in Northampton Township, Summit County, Ohio. Under TDD# T05-9201-037, issued on January 30, 1992, TAT was tasked to complete several tasks prior to beginning field work. These included a review of available information to establish a potential threat to human health and the environment, preparation of a health & safety plan and a sampling plan, completion of a chronology of events and compilation of other site related information. TAT was also tasked to complete an extent of contamination study and provide documentation of on-site activities, including photodocumentation. At the request of U.S. EPA On-Scene Coordinator (OSC) Ross Powers, TAT conducted a site assessment and collected samples on February 10 and 11, 1992, respectively.

2.0 SITE BACKGROUND

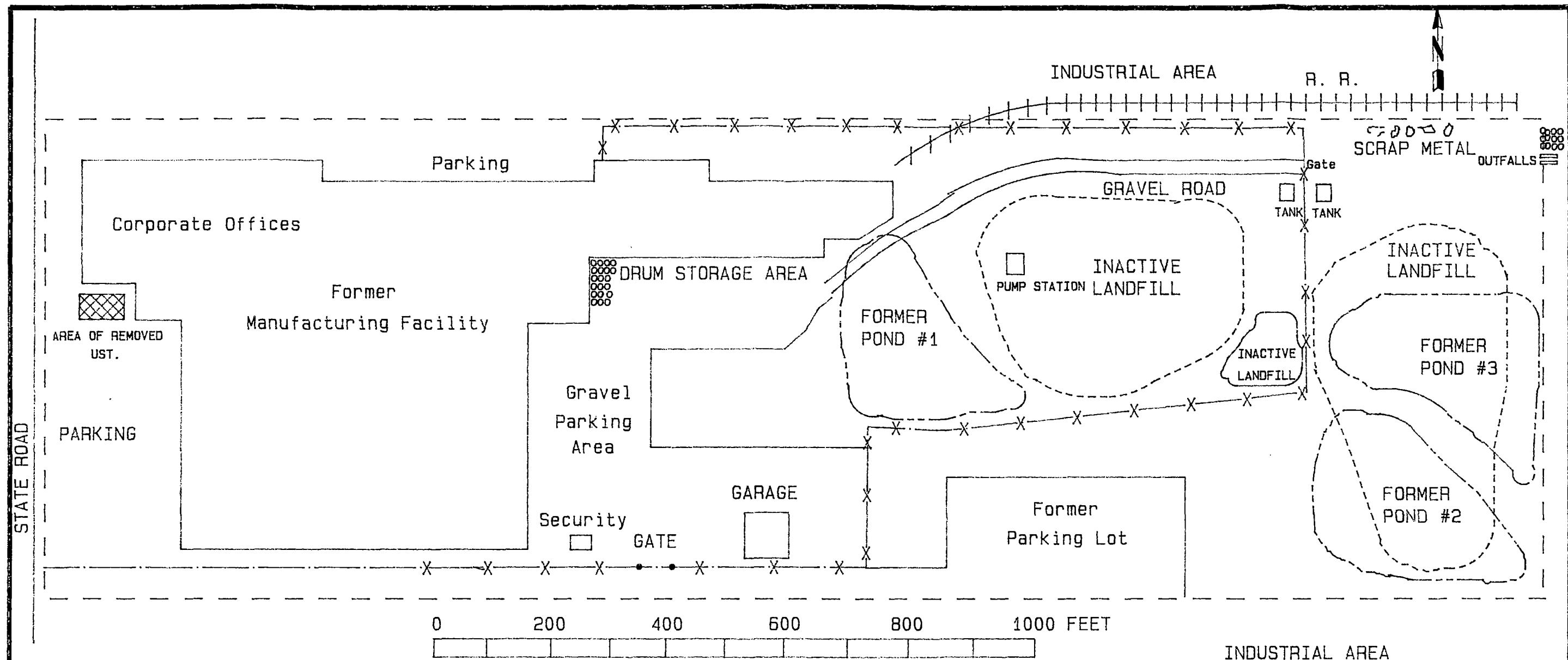
2.1 Site Description

The Alside, Inc., site is a 53 acre facility located at 3773 State Road in Cuyahoga Falls, Northampton Township, Summit County, Ohio (T.3N., R.11W.) (Figure 1). The manufacturing facility is currently inactive but once produced coated aluminum and steel siding.

The site is located approximately 1 1/2 miles north of the corporate boundary of the densely populated City of Cuyahoga Falls, Ohio. Nearest residential and commercial areas are located approximately 400 feet west of the site. Directly north and south of the site are industrial areas. A wooded area and wetlands are on the east of the site. The Alside, Inc., manufacturing building is in the western portion of the property and contains the corporate offices (Figure 2). A small un-named creek, which originates on the site, flows northeast to intersect Mud Brook approximately 800 feet from the site. Mud Brook is used extensively by area residents for recreational boating and fishing. Mud Brook empties into the Cuyahoga River approximately 3 1/2 miles downstream of the site (Figure 1).

2.2 Site Hydrogeology

The Alside, Inc., facility is underlain by unconsolidated glacial deposits of silt and clay, which were deposited in lakes that periodically formed during the Pleistocene epoch. The most extensive deposits of silt and clay are in the valleys of glacial drainage systems, such as the valley of the present Cuyahoga River.



LEGEND

- PARTIALLY BURIED DRUMS
- x—x—x FENCE
- - - - - PROPERTY LINE

FIGURE 2 SITE FEATURES ALSIDE INC.

AKRON SUMMIT COUNTY, OHIO



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However, these silts and clays are commonly intermixed with till and/or sand and gravel. The gravel material may predominate with increasing depth in the site area. The thickness of these unconsolidated deposits in the area of the site are approximately 40 feet.

The bedrock underlying these glacial deposits consists of Sharon conglomerate sandstone of Pennsylvanian age. The glacial deposits and the bedrock are hydraulically interconnected. The glacial deposits often provide recharge to the bedrock aquifers which serve as the principal source of underground water in this area. The depth to bedrock in the area of the site is approximately 65 feet and the aquifer has the potential of yielding over 50 gallons of water per minute.

The site has a shallow water table, with the regional hydraulic flow gradient to the west and southwest toward the Cuyahoga River. Local groundwater flow direction can vary seasonally.

The city of Cuyahoga Falls has 15 municipal wells located at its Waterworks Park, which is located approximately 3 miles southeast of the site. These wells are ranged from 30 to 120 feet deep. The water from these wells is blended and then distributed to the cities of Cuyahoga Falls, Silver Lake, and Munroe Falls. The population outside the Cuyahoga Falls municipal water system boundaries use private wells (Urban 1990). There are approximately 838 homes within a 3-mile radius of the site (United States Geological Survey topographic maps) that use private wells.

2.3 SITE HISTORY

The facility began operation in 1958 and ceased in 1989. Currently, only executive offices are present on site. Facility operations varied during the years of operation. During the late 1950s, the process initially involved removing grease from the metal coils with hot detergent, followed by a chromic acid etching rinse and then priming (using solvent based paint) with hot air drying in between these steps. The siding was formed and cut to length. Finally, the panels were finished with spray coating (alkyl oil based paint) and then oven dried. Fiber backing was added to some insulated fiber products. In the 1980's, the materials used to produce the siding changed from mostly aluminum to steel, plastic (poly vinyl) and plastic coated steel (Hess, 1981).

From the 1960s to 1979, the solid waste generated from the plant, including paint sludge, waste solvents, wood, paper and other dry scrap materials, were disposed of on-site in three landfills, approximately 3 1/2 acres, 2 acres and 1/2 acre each, with a maximum depth of 20 feet. The landfills were covered with

clay and were graded when they were removed from service (E & E 1991).

During the 1981 U.S. EPA FIT site inspection, site representative Larry Cochran stated that their current waste inventory for mixed paint sludge was 4,400 drums. These drums were stored on drum storage area (Hess, 1981). Two storage areas on graded gravel located east of the main plant buildings were used for hazardous waste storage until June 1989. Some of the drums were in poor condition with evidence of spillage around them. These areas were used for the storage of drummed paint thinner and paint sludge. The paint sludges were sent off-site for disposal. Solvents were either sent off-site for disposal or reclaimed in an on-site distillation unit.

From 1958 to 1980, wastewater from plant operations was discharged to a 1.4 acre, on-site settling pond, which was used to remove solids from wastewater resulting from the treatment and finishing of metal strip. Wastewater from the settling pond was discharged to a National Pollution Discharge Elimination System (NPDES)-permitted wastewater outfall located at the northeast corner of the site. This wastewater outfall empties into a small un-named creek which flows to Mud Brook, a tributary of the Cuyahoga River. According to records, the dredgings from settling pond were placed into a one-half acre landfill on site. For a period of two or three years, a wastewater treatment system was utilized on-site to reduce the hexavalent chromium in the wastewater to trivalent chromium. This system initially consisted of treatment of wastewater in the original settling pond. Later, two more settling ponds were added in series to the original pond to reduce the total suspended solids discharging from the wastewater outfall. These ponds were constructed on top of an inactive landfill. In 1980, the facility was converted to a non-rinse coil treatment system, and all processed wastewater discharge to surface water was eliminated. In 1981, the settling ponds were covered with clay and the entire area was regraded (Cochran, 1983; E&E, 1991). In 1982, at the request of the Ohio Environmental Protection Agency (OEPA), Alside, Inc., installed six monitoring wells on-site. Samples from the wells were collected quarterly for a period of one year. The samples were analyzed for arsenic, barium, cadmium, lead, chromium (hexavalent), and total organic carbon. The sample analysis data are not available in TAT file at this time.

3.0 SITE ACTIVITIES

On February 10, 1992, OSC Ross Powers and U.S. EPA Resource Conservation and Recovery Act (RCRA) Enforcement Project Manager (PM) Rita Cestaric conducted a meeting with Alside, Inc., representatives John Shaner, James Bussman, Ben McGarry and David Campbell. Also present at the meeting were OEPA representatives Kristen Switzer and Eileen T. Mohr, and TAT members Anne Busher and

Nazeer Uddin. During the meeting, OSC Powers briefed site representatives on the site inspection and the collection of samples that were planned in order to obtain information on releases to the environment. During this meeting, Alside, Inc., representatives informed the OSC that there were underground solvent storage tanks in front of the building that had been removed and disposed off-site. Two petroleum storage tanks also were removed from the front of the building and contamination had been found. The Bureau of Underground Storage Tank Removal (BUSTR) had not been informed of the removal of the underground storage tanks. A report concerning the removal of the underground storage tanks will be submitted to U.S. EPA RCRA Enforcement Branch by Alside, Inc.

3.1 RECONNAISSANCE INSPECTION

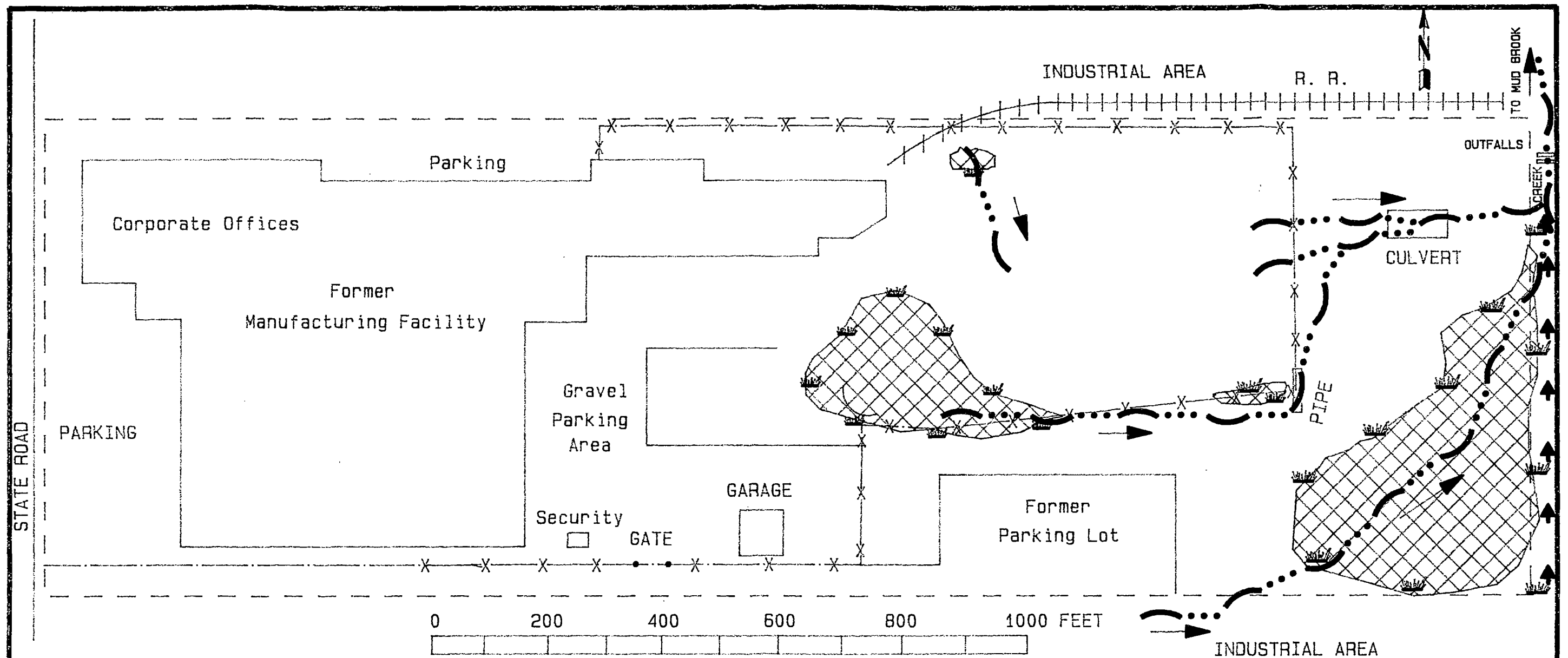
On February 10, 1992, OSC Powers, RCRA PM Cestarcic, OEPA representatives Switzer and T. Mohr, and TAT members Busher and Uddin conducted a site inspection of the Alside, Inc., facility. Site representatives Shaner and David Mattern were also present during the site inspection. During the initial walk through, the site was screened with a radiation meter (Ludlum Model 19 Micro R Meter), a photoionization detector (HNU), a combustible gas/oxygen meter (CGI), and a cyanide monitox. No elevated readings above background were measured on any of the instruments in the breathing zone. A slam bar was utilized to punch holes to an approximate depth of 3 feet near the paint sludge dump adjacent to the southern fence. Soil gases from this point demonstrated elevated organic vapors at a level of 20 ppm over background. Sample S6 was collected at this location.

An access road leads east from State Road along the south side of the property to a former parking area. A gate is located next to a staffed security building near the southeast corner of the manufacturing building. A gravel road leads from the parking area to a locked gate which provides access to the eastern portion of the site. The central portion of the site is fenced (Figure 2). Settling pond #1 and two inactive landfills are located within the fence.

Two former settling ponds, pond #2 and pond #3, and an inactive landfill are located in the eastern portion of the site and are not included within the fence. The two settling ponds were constructed on top of the landfill after it became inactive.

There are wetlands present at the eastern portion of the site and extend off-site (Figure 3). The topography of the site is generally rolling, and slopes steeply (approximately 6 %) toward an on-site wetlands that are located in the southeast portion of the site (Figure 4).

Surface water runoff on-site drains to drainage ditches that



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


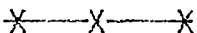

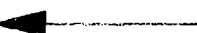
-  WET LANDS
-  TREES
-  INTERMITTENT STREAM
-  FENCE
-  PROPERTY LINE
-  FLOW DIRECTION

FIGURE 3
ON SITE WETLANDS AND
INTERMITTENT STREAM
ALSIDE INC.

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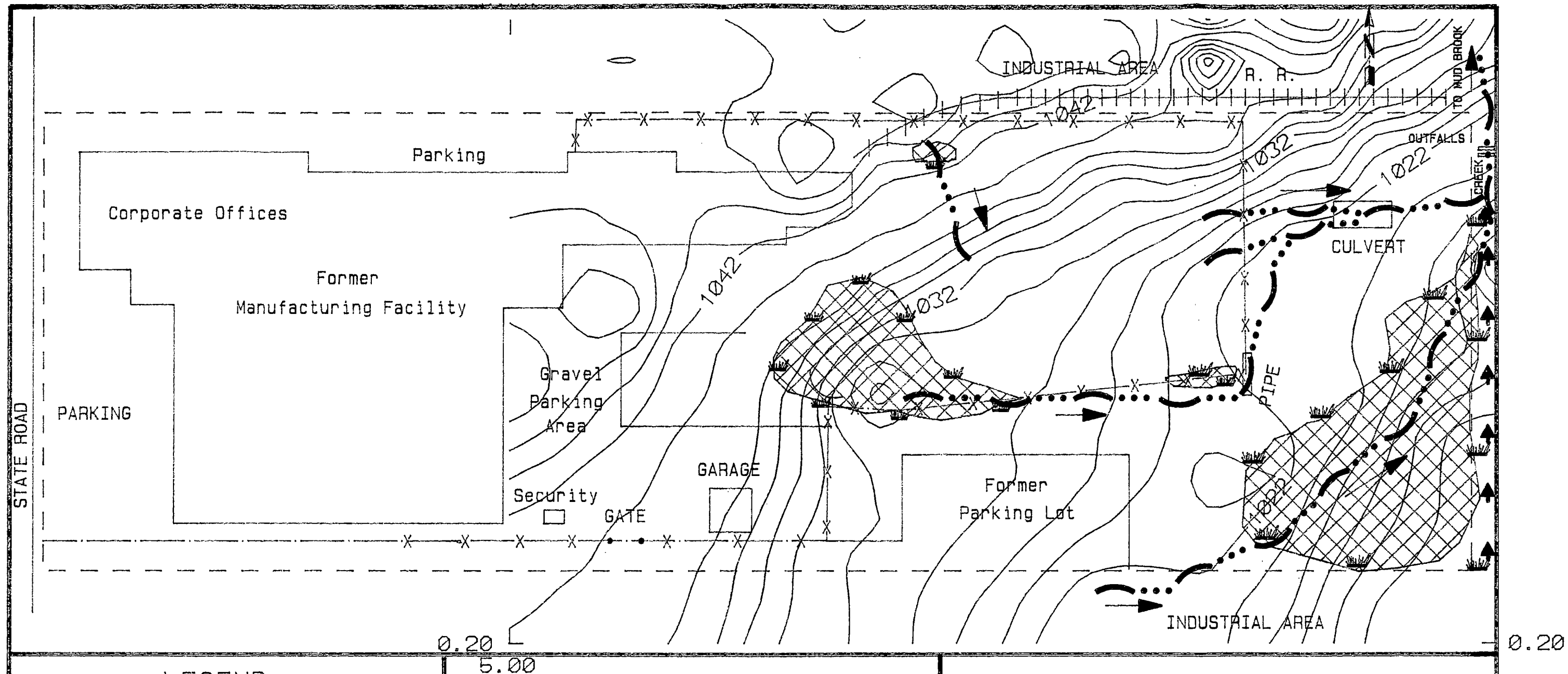
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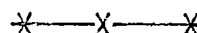
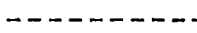
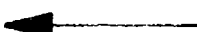
-  WET LANDS
-  TREES
-  INTERMITTENT STREAM
-  FENCE
-  PROPERTY LINE
-  FLOW DIRECTION

FIGURE 4

TOPOGRAPHIC MAP

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flow east from the fill area and toward the wetlands along the eastern portion of the site. An intermittent stream runs along the southern portion of the site boundary and then curves to the northeast into the on-site wetlands. Runoff from the culvert which is located in the center of the inactive landfill empties into a small creek at east of the site (Figure 3).

Two outfalls which empty into a small creek, are located in the northeast corner of the site. One outfall releases drainage from roof runoff and floor drains in the facility. The other was once used for non-contact rinse water and is currently inactive. A small creek, which originates on the site, flows northeast to intersect Mud Brook approximately 800 feet from the site. Mud Brook empties into the Cuyahoga River approximately 3 1/2 miles downstream of the site. An old oil boom, which was used to keep oily material from flowing downstream, was observed across the small creek.

The site is covered with vegetation. However, several area of stressed vegetation were observed on the western and eastern inactive landfills. Several large spots on the landfills were void of vegetation. Closer inspection of the soils showed visible "paint like wastes on the soils. A sample (S7) was collected for further analysis of the material.

Approximately 17 partially buried drums were noted and some of them are above ground and scattered around the northeast boundary of the site. Another partially buried drum was observed fifty feet north of the outfalls. These drums were observed to be filled with what appeared to be paint sludge.

A pump station is located at the west portion of former of pond #1 (Figure 5). It collects surface drainage water from the facility and pumps it into the city sewer system. Alside, Inc., representatives indicated that raw sewage had leaked or over flowed the system in the past. They also indicated that the problems had been addressed and corrected. Miscellaneous machine parts, scrap metal, and two large empty tanks were observed at the northern portion of the site.

Approximately 20 drums were observed at the drum storage area located east of the facility building. The drums did not appear to be rusted or leaking; however, they were not staged on wooden pallets. The Alside, Inc., site is not completely surrounded by fencing; only the western portion is totally fenced. Photographs of the Alside, Inc., site are provided in Appendix A.

3.2 SAMPLING ACTIVITIES

On February 11, 1992, samples were collected to determine whether contaminants were present at the site. Seven sample locations were selected by OSC Powers and RCRA PM Cestaric during

the February 10, reconnaissance inspection (Figure 5).

TAT members collected two drum samples, two sediment samples, one surface water sample and two surface soil samples. Split samples of the soil/sediment/surface water and drum contents were provided to Matthew Cousino (ENSR Consulting & Engineering) per request of Mr. Shaner, site representative.

3.2.1 DRUM SAMPLING ACTIVITIES

Drum sample D1 was a grab sample taken from one of the 17 partially buried drums located in the northeast boundary of the site. The material appeared to be a grey dried paint sludge. Drum sample D2 was a grab sample of white dried paint collected from a drum approximately 20 feet south of drum D1. Drum samples D1 and D2 were collected to determine whether the materials in the drums constituted a hazard (Figure 5).

3.2.2 SURFACE WATER SAMPLING ACTIVITIES

Surface water sample SW3 was collected from the discharge point of the facility outfall into the small creek. Sample SW3 was collected to determine whether the contaminants had migrated off-site via the outfalls.

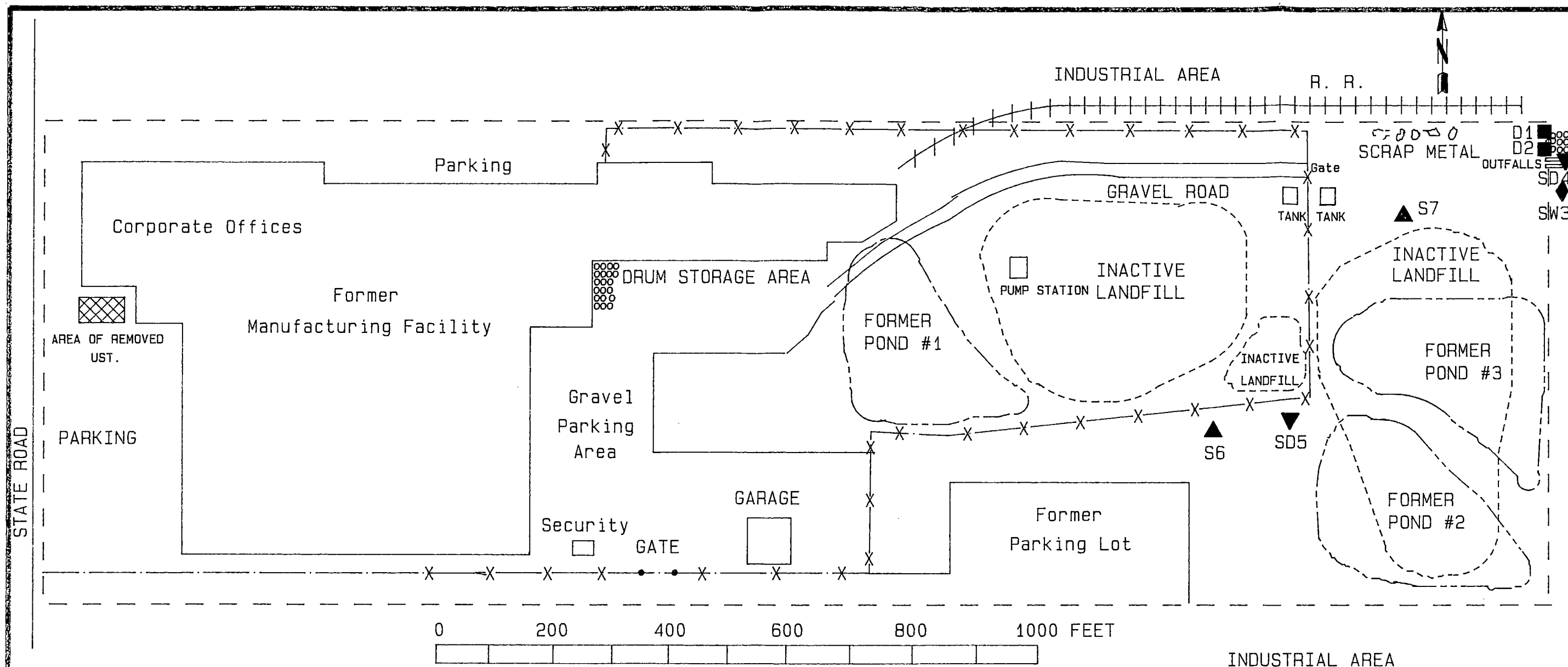
3.2.3 SOIL/SEDIMENT/SAMPLING ACTIVITIES

Sediment sample SD4 was a grab sample collected at a location approximately 10 feet downstream from the outfall pipe in the small creek. Sediment sample SD4 was collected to determine whether contaminants were migrating off-site. Sediment Sample SD5 was a grab sample collected from the on-site intermittent stream, located at the southeast of the fenced area. Sample SD5 was collected where surface drainage from southern side of the site drains into the intermittent stream. Sediment sample SD5 was collected to determine whether contaminants were present in on-site intermittent stream.

Surface soil samples S6 and S7 were grab samples. Sample S6 was collected from a patch near what appeared to be the paint sludge dump area immediately adjacent to the southern fence. The location was approximately 100 yards west of the sample location SD5. An HNu reading of 20 ppm was detected in soil gases at this location. Sample S7 was collected from a patch of what appeared to be dried paint sludge approximately 300 feet north of the culvert. The samples S6 and S7 were collected to determine whether contaminants were present in this area (a summary of samples collected and their locations is presented in Table 1-1).

3.2.4 SAMPLING PROCEDURES

Drum samples D1 and D2 were collected from dried paint sludge



LEGEND

- ▲ SOIL SAMPLE
- ▼ SEDIMENT SAMPLE
- DRUM SAMPLE
- ◆ SURFACE WATER SAMPLE
- x—x—x FENCE
- - - - - PROPERTY LINE

FIGURE 5
ON-SITE SAMPLING LOCATION
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TABLE 1-1
SAMPLE SUMMARY TABLE

SAMPLE	LOCATION	MATRIX	TIME	DEPTH
D1	One of the 17 partially buried drums located at northeast of the site.	Drum Sample (paint sludge)	1355	1"-6"
D2	Northeast boundary of the site taken from one of the 17 partially buried drums.	Drum sample (paint sludge)	1420	1"-6"
SW3	Collected from the discharge point of one facility outfall into small creek at northeast side of the site.	Surface water	1300	
SD4	Collected from above the small creek about 10 feet from the outfall.	Sediment	1325	1'
SD5	On-site intermittent stream, which is located near the south-east side of the fenced area.	Sediment	1645	1'
S6	Adjacent to the south side of on-site fenced area.	Soil	1705	0"-6"
S7	Approx. 300 feet north of the culvert, well outside the fenced area.	Soil	1630	0"-6"

using a hammer and chisel. All material collected from each sample point was placed into a separate mixing pan and mixed until homogeneous. The material was then transferred into labeled sample bottles using stainless steel spoons and trowels.

Sediment samples SD4 and SD5 were collected at a depth of approximately 1 foot below the surface with a shovel. Surface samples S6 and S7 were collected at a depth of approximately 1 to 6 inches using a separate trowel for each sample. The samples were collected with a stainless steel trowel, placed into a mixing pan, and mixed until homogeneous. The material was then transferred into labeled sample bottles. The samples were cooled to approximately 4 C, sealed with EPA custody seals, and stored in a locked room. The samples were sent to Wadsworth/Alert, Canton, Ohio, under analytical TDD # T05-9201-037 on February 15, 1992, (Attachment 1).

Standard E & E decontamination procedures were adhered to during the collection of all samples. The procedures included the scrubbing of all equipment (eg. trowel and shovel) with a decontamination solution of detergent (Alconox) and distilled water, triple rinsing the equipment with distilled water, a 10 % nitric acid wash followed by triple rinse of distilled-deionized water.

4.0 ANALYTICAL RESULTS

The drum samples D1 and D2, and soil samples S6 and S7 were analyzed for semivolatile organics (BNA), priority pollutant (P.P) metals, barium, aluminum and iron. Surface water sample SW3 was analyzed for volatile organics (VOAs), semivolatile organics (BNA), P.P metals, barium, aluminum and iron. Sediment samples SD4 and SD5 were analyzed for semivolatile organics (BNA), total cyanide, reactive cyanide, P.P metals, barium, aluminum and iron.

Chemical Analysis of sediment sample SD4 indicated the presence of metals and polynuclear aromatic hydrocarbons (PAHs), including chromium (960 mg/kg), mercury (200 mg/kg), lead (380 mg/kg), total cyanide (32 mg/kg), Bis(2-ethylhexyl) phthalate (60,000 (J) ug/kg), pyrene (8,800 (J) ug/kg), fluoranthene (10,000 (J) ug/kg), 2-mrthylnaphthalene (18,000 (J) ug/kg) and napthalene 340,000 ug/kg). Surface soil sample S7 revealed the presence of cadmium (88 mg/kg), nickel (30 mg/kg) and antimony (250 mg/kg). Surface water sample SW3 also indicated the presence of xylene (150 ug/kg) and toluene (13 ug/kg). Detailed analytical results are presented in Table 1-2).

5.0 DISCUSSION OF POTENTIAL THREATS

The conditions present at the facility that may constitute a threat to public health and welfare or the environment based upon the considerations as set forth in the National Contingency Plan

TABLE 1-2

RESULTS OF CHEMICAL ANALYSIS TAT COLLECTED SAMPLES

DATE 2/11/92

SAMPLE LOCATION

COMPOUNDS DETECTED	D1	D2	SW3	SD4	SD5	S6	S7
SILVER	*	*	*	*	9.8	*	*
ARSENIC	2.4	2.3	*	3.5	2.3	8.0	1.6
BARIUM	55	30	0.07	310	41	47	140
BERYLLIUM	*	*	*	0.25	0.25	0.50	*
CADMIUM	6.2	0.7	*	9.2	0.9	*	88
CHROMIUM	21	32	*	960	85	28	19
COPPER	7.8	14	*	13	28	14	10
MERCURY	*	*	*	200	*	*	*
NICKEL	14	22	*	8.5	7.4	16	30
LEAD	45	52	*	380	24	25	90
ANTIMONY	30	16	*	83	*	*	250
ZINC	6,700	6,200	0.24	1,500	510	1,200	6,000
CYANIDE, TOTAL	NA	NA	NA	32	1.3	NA	NA
BIS(2-ETHYLHEXYL)PHTHALATE	*	*	*	60,000J	130J	*	*
DI-N-OCTYL PHTHALATE	*	*	*	12,000J	*	*	4,200J
FLUORANTHENE	*	*	*	10,000J	*	*	*
ISOPHORONE	730 J	*	*	*	*	35,000	*
2-METHYLNAPHTHALENE	*	3,600J	*	18,000J	*	44,000	*
NAPHTHALENE	*	3,400J	*	340,000	*	8,600J	*

TABLE 1-2

RESULTS OF CHEMICAL ANALYSIS TAT COLLECTED SAMPLES

DATE 2/11/92

SAMPLE LOCATION

COMPOUNDS DETECTED	D1	D2	SW3	SD4	SD5	S6	S7
PHENOL	NA	NA	31	NA	NA	NA	NA
ACETONE	NA	NA	15J	NA	NA	NA	NA
2-BUTANONE	NA	NA	13J	NA	NA	NA	NA
ETHYLBENZENE	NA	NA	16	NA	NA	NA	NA
2-PENTANONE,4-METHYL	NA	NA	170	NA	NA	NA	NA
TOLUENE	NA	NA	13	NA	NA	NA	NA
XYLENES,TOTAL	NA	NA	150	NA	NA	NA	NA
PYRENE	*	*	*	8,800J	*	*	*
ALUMINUM	3,000J	3,500	*	4,200	3,400	6,200	3,400
IRON	7,500	44,000	0.68	9,300	11,000	15,000	4,000

FOOTNOTES

J Estimated concentration below statistical
detection limit but above instrument
detection limit.

* Not detected.

NA Not analyzed

(NPC), 40 CFR Section 300.415 (b) (2) and may, therefore, justify that a removal action be conducted at this site, include, but are not limited, to the following:

Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals or food chain.

A potential may exist for the public to come into contact with hazardous substances in the drums, which are partially buried on the northeast boundary of the site. Public access to the site is not restricted because there is no fence or any other barriers on the eastern boundary of the property.

Analytical results of the drum samples D1 and D2 indicated chromium (32 mg/kg) and lead (52 mg/kg) were detected in on-site drum samples. The toxicological significance of these contaminants will be discussed below.

Hazardous substances or pollutants and contaminants in sediment /surface water that may pose a threat of release.

There is a potential for surface water contamination to migrate from the site through the un-named creek to Mud Brook, a tributary of the Cuyahoga River. A sediment sample collected near the outfalls indicated chromium (960 mg/kg), mercury (200 mg/kg), cyanide (32 mg/kg) and lead (380 mg/kg) at elevated levels.

The population potentially affected by the migration of contamination to surface water include those persons using Mud Brook for recreational purposes (boating and fishing) and drinking water for animals.

Chemical hazards of contaminants documented at the site.

The following is a list of chemical contaminants of potential concern at the Alside, Inc., site. These contaminants were present in varying concentrations at the facility. All are known hazards at the documented levels of detection.

Chromium is a potential carcinogen via inhalation, ingestion, eye and dermal routes of exposure. Acute exposures to dust or mist may cause coughing and irritation to the skin and mucous membranes of the upper respiratory tract. NIOSH recommends that exposure to chromium metal may be limited to a PEL of 0.47 ppm. Chromium is regulated under RCRA; chromium-containing solid waste may be a hazardous waste if the concentration of chromium exceeds established values. The highest concentration of chromium detected was 960 mg/kg in sediment sample SD4. Potential pathways of exposure would be inhalation of resuspended sediment/soil particles and ingestion of contaminated sediments/soils.

Mercury is highly toxic by skin absorption and inhalation of

fumes or vapors, and both inorganic and organic compounds are considered toxic. NIOSH recommends a TWA of 0.05 mg/m³ for occupational exposure and an IDLH (Immediately Dangerous to Life and Health) of 28 ppm. The highest concentration of mercury detected on site was 200 ppm at the location of sample SD4. Potential exposure pathways would be inhalation of resuspended sediment/soil particles, ingestion of contaminated sediments/soils, and dermal absorption by direct contact.

Lead is toxic by ingestion and inhalation of dust or fumes, and is considered a cumulative poison. There are no local effects or symptoms for lead poisoning. The early systemic effects of lead poisoning are nonspecific. When large amounts are inhaled or ingested, the central nervous system is affected. Lead is also a hazardous waste constituent. The highest concentration of lead present at the site is 380 mg/kg detected at the location of sample SD4. Possible routes of exposure would be inhalation of resuspended sediment/soil particles and ingestion of contaminated sediments/soils.

Cadmium is toxic by inhalation and ingestion. NIOSH recognizes cadmium as a potential human carcinogen and recommends that exposure be reduced to the lowest feasible concentration possible. The highest concentration of cadmium detected on site is 88 mg/kg found in sample S7. Potential exposure pathways for cadmium would be inhalation of resuspended sediment/soil particles and possible ingestion of contaminated sediments/soils.

Cyanides are a diverse group of compounds which can be extremely toxic in all forms. Cyanides can be absorbed through the skin, and some cyanides have a corrosive effect which increases the rate of absorption. High levels of cyanide produce adverse effects to the central nervous system, respiratory system, and cardiovascular system. Cyanide can cause coma and/or death. Cyanide exposures to lower levels, result in deep breathing; shortness of breath; convulsions; and loss of consciousness. The highest concentration of cyanide detected on site is 32 mg/kg found in sediment sample SD4. Cyanide is extremely toxic to freshwater organisms, causing death at levels as low as 50 ug/l. Effects such as reduced survival and reduced reproduction were observed in fish chronically exposed to free cyanide concentrations ranging from 10 to 50 ug/l.

Toluene is a toxic non-carcinogen via inhalation, ingestion, eye and dermal routes of exposure. It is an irritant to the eyes, respiratory tract and skin. The highest concentration of toluene detected on site was 13 ug/kg at the location of sample SW3.

Xylene a hazardous substance via inhalation, ingestion, eye and dermal routes of exposure. Xylene is irritating to the eyes and mucous membranes. The highest concentration of xylene present at the site is 150 ug/kg detected at the location of sample SW3.

Polynuclear aromatic hydrocarbons (PAHs) are easily absorbed by all means of exposure. The highest concentration of PAHs found in sample SD4. The most significant toxic effect associated with PAHs is their potential carcinogenicity (cancer-causing effect). Various PAHs as a group are known to be toxic, mutagenic, teratogenic and carcinogenic. Noncarcinogenic effects resulting from exposure to PAHs include skin disorders and immune suppression, as well as adverse effects on the kidney and liver. PAHs are only slightly soluble in water and are strongly absorbed by solids. This leads to accumulation in sediments.

6.0 References

Sitting M., 1985, Handbook of Toxic and Hazardous Chemicals and Carcinogens, 2nd edition.

Weiss, G., 1986, Hazardous Chemical Data Book, 2nd edition.

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Dangerous Properties of Industrial Materials, Six Edition, N. Irving Sax, copyright 1984 by Van Nostrand Reinhold company Inc.

U.S. EPA May 1, 1991, Screening site Inspection Report for Alside Inc. site prepared by E & E Inc.

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Urban, James, July 24, 1990, Cuyahoga Falls Water Department, telephone conversation, contacted by Jeffrey Taylor of E & E.

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U.S. EPA June 19, 1981, Site Inspection Report for Alside Inc. site prepared by Paul Hess of E & E.

Appendix A
SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 1 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA

DATE: 2/11/92

TIME: 1355

DIRECTION OF
PHOTOGRAPH: South

WEATHER
CONDITIONS:
Cloudy, 10 °F

PHOTOGRAPHED BY:
Nazeer Uddin

SAMPLE ID
(if applicable): D1



DESCRIPTION: Close-up photograph showing location of drum sample D1 taken from partially buried drum at northeast portion of the site.

DATE: 2/11/92

TIME: 1420

DIRECTION OF
PHOTOGRAPH: West

WEATHER
CONDITIONS:
Cloudy, 10 °F

PHOTOGRAPHED BY:
Nazeer Uddin

SAMPLE ID
(if applicable): D2



DESCRIPTION: Close-up photograph showing location of drum sample D2 taken from drum at northeast of the site.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 2 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA

DATE: 2/11/92

TIME: 1300

DIRECTION OF
PHOTOGRAPH: West

WEATHER
CONDITIONS: Cloudy, 10 °F

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): SW1



DESCRIPTION: Close-up view showing location of surface water sample SW3 taken from the water discharge from the outfall pipe which empties into a small creek.

DATE: 2/11/92

TIME: 1300

DIRECTION OF
PHOTOGRAPH: West

WEATHER
CONDITIONS: Cloudy, 10 °F

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): SW3



DESCRIPTION: Perspective view showing location of sample SW3 taken from the water discharge from the outfall pipe which empties into a small Creek.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 3 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA

DATE: 2/11/92

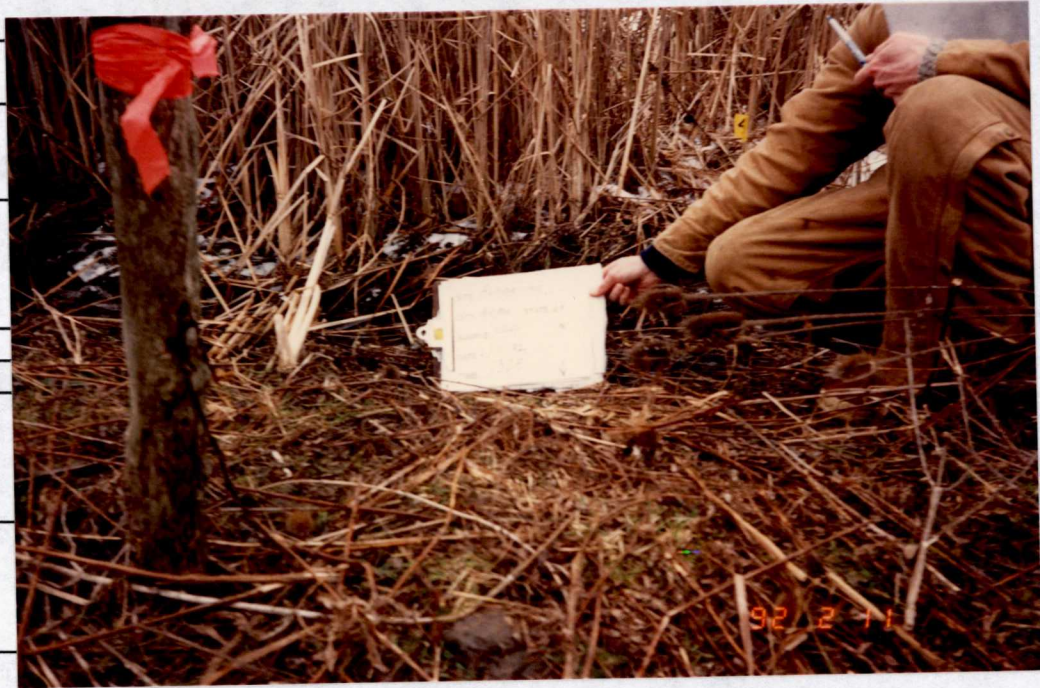
TIME: 1325

DIRECTION OF
PHOTOGRAPH: South

WEATHER
CONDITIONS:
Cloudy, 10 °F

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): >SD4



DESCRIPTION: Clouse-up photograph showing location of sediment sample SD4 taken from the small Creek.

DATE: 2/11/92

TIME: 1325

DIRECTION OF
PHOTOGRAPH: South

WEATHER
CONDITIONS:
Cloudy, 10 °F

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): SD4



DESCRIPTION: Perspective view showing location of sample SD4.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 4 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA

DATE: 2/11/92

TIME: 1645

DIRECTION OF
PHOTOGRAPH: South

WEATHER
CONDITIONS:
Cloudy, 10 °F
>

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): SD5



DESCRIPTION: Close-up photograph showing location of sediment sample SD taken from the on-site intermittent stream.

DATE: 2/11/92

TIME: 1645

DIRECTION OF
PHOTOGRAPH: West

WEATHER
CONDITIONS:
Cloudy, 10 °F
>

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): SD5



DESCRIPTION: Perspective view showing location of sediment sample SD5 taken from the on-site intermittent stream which is located at south side of the fence.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 5 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA

DATE: 2/11/92

TIME: 1705

DIRECTION OF
PHOTOGRAPH: North

WEATHER
CONDITIONS:
Cloudy, 10 °F

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): S6



DESCRIPTION: Close-up photograph showing location of soil sample S6 collected from a paint sludge dump area adjacent to the south side of fence.

DATE: 2/11/92

TIME: 1705

DIRECTION OF
PHOTOGRAPH: North

WEATHER
CONDITIONS:
Cloudy, 10 °F

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): S6



DESCRIPTION: Perspective photograph showing location of soil sample S6.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 6 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA

DATE: 2/11/92

TIME: 1630

DIRECTION OF
PHOTOGRAPH: North

WEATHER
CONDITIONS:
Cloudy, 10 °F

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): S7



DESCRIPTION: Close-up view showing location of soil sample S7 taken from a dried paint sludge spill with no vegetation area approximately 300 feet north of the culvert.

DATE: 2/11/92

TIME: 1630

DIRECTION OF
PHOTOGRAPH: North

WEATHER
CONDITIONS:
Cloudy, 10 °F

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): S7



DESCRIPTION: Perspective view showing location of soil sample S7.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 7 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA

DATE: 2/11/92

TIME: 1425

DIRECTION OF
PHOTOGRAPH: North

WEATHER
CONDITIONS:
Cloudy, 10 °F
>

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): >



DESCRIPTION: View showing the partially buried and above ground drums scattered around the northeast of the site.

DATE: > 2/11/92

TIME: 1425

DIRECTION OF
PHOTOGRAPH: West

WEATHER
CONDITIONS:
Cloudy, 10 °F
>

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): >



DESCRIPTION: Close-up photograph of a drum filled with dried paint sludge at the northeast of the site.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 8 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA

DATE: 2/11/92

TIME: 1430

DIRECTION OF
PHOTOGRAPH: North

WEATHER
CONDITIONS: Cloudy, 10 °F

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): >



DESCRIPTION: Scattered partially buried and above ground drums filled with paint sludge located northeast of the side.

DATE: 2/11/92

TIME: 1310

DIRECTION OF
PHOTOGRAPH: North

WEATHER
CONDITIONS: Cloudy, 10 °F

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): >



DESCRIPTION: A drum observed partially buried located 50 feet north of the on-site outfalls.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 9 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA

DATE: 2/11/92

TIME: 1330

DIRECTION OF

PHOTOGRAPH: East

WEATHER

CONDITIONS:

Cloudy, 10 °F

>

PHOTOGRAPHED BY:

N. Uddin

SAMPLE ID

(if applicable): >



DESCRIPTION: An old oil boom, which was used to keep oily material flowing downstream from the Creek.. An oil film was also observed on the water.

DATE: 2/11/92

TIME: 1640

DIRECTION OF

PHOTOGRAPH: West

WEATHER

CONDITIONS:

Cloudy, 10 °F

>

PHOTOGRAPHED BY:

N. Uddin

SAMPLE ID

(if applicable): >



DESCRIPTION: On-site culvert location in center of the inactive landfill east of the fence, which collects run-off from on-site intermittent streams.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 10 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA

DATE: 2/11/92

TIME: 1645

DIRECTION OF
PHOTOGRAPH: West

WEATHER
CONDITIONS: Cloudy, 10 °F
>

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): >



DESCRIPTION: Picture shows on-site stream, located in the east portion of the site.

DATE: 2/11/92

TIME: 1440

DIRECTION OF
PHOTOGRAPH: East

WEATHER
CONDITIONS: Cloudy, 10 °F
>

PHOTOGRAPHED BY:
N. Uddin

SAMPLE ID
(if applicable): >



DESCRIPTION: Photograph showing two empty tanks and an On-site gate, which leads to the eastern portion of the site.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 11 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA



DATE: 2/11/92 TIME: 1710 DIRECTION OF PHOTOGRAPH: East PHOTOGRAPHED BY: N. Uddin

WEATHER CONDITIONS: Cloudy, 10 °F SAMPLE ID (if applicable): >

DESCRIPTION: Panoramic view facing east toward on-site fence.

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 12 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA



DATE: 2/11/92 TIME: 1715 DIRECTION OF PHOTOGRAPH: Southeast PHOTOGRAPHED BY: N. Uddin

WEATHER CONDITIONS: Cloudy, 10 °F SAMPLE ID (if applicable): >

DESCRIPTION: Panoramic view facing southeast toward on-site wetlands.

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 13 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA



DATE: 2/11/92 TIME: 1730 DIRECTION OF PHOTOGRAPH: West PHOTOGRAPHED BY: N. Uddin

WEATHER CONDITIONS: Cloudy, 10 °F SAMPLE ID (if applicable): >

DESCRIPTION: Panoramic view facing west toward former manufacturing building..

>

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 14 OF 15

U.S. EPA ID: >

TDD: T05-9201-037

PAN: EOH0952SAA



DATE: 2/11/92 TIME: 1730 DIRECTION OF PHOTOGRAPH: N. Uddin PHOTOGRAPHED BY: >

WEATHER CONDITIONS: Cloudy, 10 ° F SAMPLE ID (if applicable): >

DESCRIPTION: Panoramic view facing southeast toward on-site fence. Picture also shows scrap metals and an empty tank.

>

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: ALSIDE INC.

PAGE 15 OF 15

U.S. EPA ID: >

TDD: >

PAN: EOH0952SAA



DATE: 2/11/92 TIME: 1445 DIRECTION OF PHOTOGRAPH: Northeast PHOTOGRAPHED BY: N. Uddin

WEATHER CONDITIONS: Cloudy, 10 °F SAMPLE ID (if applicable): >

DESCRIPTION: Panaromic view of miscellaneous machine parts and scarp metal at the northern portion of the site.
Picture also shows a railroad track.

Appendix B

WELL LOGS

10/19/1992 09:50 FROM MPCA

TO

82162436923 P.02

L. BAKER, III

FIELD TEST BORING RECORD

W-1



Alside, Inc.

RECORD				VISUAL DESCRIPTION - SOIL					
SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC.(FT)	UNIFIED CLASS.	LAB. MOISTURE CONTENT(%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
S 10 12 23		F			SILT and CLAY, little gravel	Gray	Very stiff to hard	Damp, -PL	
									18.0 993.2
S 4 12 14		F			SILT and SAND, fine, little clay	Brown	Medium dense	Damp, NP	
									21.0 990.2
S 5 8 13		F ML	13		CLAYEY SILT, some fine sand, trace gravel	Gray	Very stiff	Damp, -PL	
									24.0 987.2
S 9 15 19		F			SILT and SAND, fine, trace clay	Gray	Dense	Damp, NP	
S 8 15 26		F ML	12						30.0 981.2
END OF BORING									
WELL DETAILS									
Casing:									
0-20' Solid 2" pvc casing (threaded joints)									
20'-30' pvc screen (0.010 inch slots)									
Backfill:									
Screen backfilled with pea gravel.									
20 lb. bentonite above gravel pack and near surface.									
Remaining annulus backfilled with auger cuttings.									
Other:									
4" protective steel casing cemented in at surface.									
35 minutes well development (air injection).									

Pennsylvania

DRILLER

B. Gallihue

MB

REP

B. Camlin

W-1

SHEET 2 of 2

2-82

10/19/1992 09:51 FROM MPCA

TO 82162436923 P.03
FIELD TEST BORING RECORDBORING NO. W-2PROJECT Alside. Inc.LOCATION Akron, OH S.O. NO. 14298-01-ARA

REMARKS _____

1982

DATE	PROGRESS	WEATHER	WATER DEPTH
11-10	0-30.0	cloudy, warm	6.4
11-12			5.8

0 hr.

See map for

location

RIG Acker AD-11 Truck MountedAUGER SIZE 4" I.D. Hollow
stemmedSAMPLER SIZE 1-3/8" I.D. HAMMER WT. 140#FALL 30"SURFACE EL. 1007.6CASING SIZE AugersHAMMER WT. --FALL --

DRILL RECORD

VISUAL DESCRIPTION - SOIL

DEPTH (FT.)	SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC. (FT.)	UNIFIED CLASS.	LAB. MOISTURE CONTENT (%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
0.0	1	S	2	F			SILTY CLAY	Brown	Soft	Moist, +PL, trace organic	
1.5											
3.0											3.0 1004.6
	2	S	8	F			SILTY CLAY, trace gravel	Brown trace gray mottling	Very stiff to hard	Damp, -PL	
4.5			12								
6.0											
	3	S	13	F	CL 16			(no mottling below 6.0')			
7.5			19								
9.0											9.0 998.6
	4	S	4	F			SILTY CLAY, few thin fine sand laminae	Brown trace gray	Stiff	Damp to Moist, =PL	
0.5			8								
2.0											
	5	S	3	F	CL ML 17						
3.5			5								
			7								

ILLING CO. PennsylvaniaDRILLER B. GallihueMB REP. B. CamlinBING NO. W-2SHEET 1 of 2

2-62

10/19/1992 09:51 FROM MPCA

TO

82162436923 P.04

HAEL BAKER, III

G NO. W-2

BT Alside, Inc.

LL RECORD						VISUAL DESCRIPTION - SOIL				
SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC. (FT.)	UNIFIED CLASS.	LAB. MOISTURE CONTENT (%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
6	S	5 7 10	F			SILTY CLAY, little fine sand	Brown	Very stiff	Moist, +PL	
										18.0 989.6
7	S	10 12 13	F			SILT, some fine sand	Gray	Medium dense	Moist, NP	
										21.0 986.6
8	S	8 6 8	F	ML	27	SAND, fine, some silt	Gray	Medium dense	Wet, NP	
										22.5 985.1
						SILT, trace fine sand	Gray	Medium dense	Moist, NP	
9	S	9 8 9	F	ML	20					
										27.0 980.6
10	S	6 8 9	F			CLAYEY SILT, trace fine sand, trace gravel	Gray	Stiff	Damp to moist, -PL	
										30.0 977.6
						END OF BORING				
						WELL DETAILS				
						Casing:				
						0-20' Solid 2" pvc casing (threaded joints)				
						20-30' pvc screen (0.010 inch slots)				
						Backfill:				
						Screen backfilled with pea gravel.				
						20 lb. bentonite above gravel pack and near surface.				
						Remaining annulus backfilled with auger cuttings.				
						Other:				
						4" protective steel casing cemented in at surface.				
						30 minutes well development (air injection).				

RILLING CO. Pennsylvania

DRILLER B. Gallihue

MB REP B. Camlin

BORING NO. W-2

SHEET 2 of 2

2-82

10/19/1992 09:52 FROM MPCA

CHAE L BAKER, III

TO 8216

WG NO. W-3



1982

SUBJECT Alside, Inc.

DATE	PROGRESS	WEATHER
11-9	0-33.0	cloudy, warm
11-10	well instal	
11-12		

LOCATION Akron, OH S.O. NO. 14298-01-ARA

MARKS

See map for

RIG Acker AD-11 Truck Mounted

AUGER SIZE 4"

location

SAMPLER SIZE 1-3/8" I.D. HAMMER WT. 140#

FALL 30"

FACE EL. 1006.1

CASING SIZE Augers

HAMMER WT.

FALL

LL RECORD

VISUAL DESCRIPTION - SOIL

SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC.(FT.)	UNIFIED CLASS.	LAB. MOISTURE CONTENT(%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
1	S	11 16 12	F			DRIED PAINT (FILL?)	White w/grn streaks	Very stiff	Damp	2.0 1004.1
2	S	3 6 8	F			SILTY CLAY (FILL?)	Brown and gray mottled	Stiff to very stiff	Damp, -PL	
3	S	10 12 19	F	ML	16					9.0 997.1
4	S	3 8 14	F			SILTY CLAY, trace fine gravel (FILL?)	Brown, trace gray	Very stiff	Damp, -PL	
5	S	4 6 9	F			SILTY CLAY (FILL?)	Gray & blk	Stiff	Moist, +PL, organic, paint odor, fine white specks	12.0 994.1 13.0 993.1
						SILTY CLAY (FILL?)	Gray	Stiff	Moist, +PL	

NG CO. Pennsylvania

DRILLER B. Gallihue

MB REP. B. Camlin

RING NO. W-3

SHEET 1 of 2

2-82

G NO. W-3

PROJECT Alside, Inc.

LL RECORD						VISUAL DESCRIPTION - SOIL				
SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC.(FT.)	UNIFIED CLASS.	LAB. MOISTURE CONTENT(%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
6	S	5 9 13	F	ML	12	SILTY CLAY, little fine sand (FILL?)	Brown	Very stiff	Damp, -PL	15.5 990.6
7	S	5 10 11	F			SILTY CLAY, with wood fibers (FILL?)	Gray	Very stiff	Moist, +PL; Sample 7 contained a nail	18.0 988.1
8	S	5 10 15	F	CL ML	13	CLAYEY SILT	Gray, brown staining	Very stiff	Damp, -PL	21.0 985.1
9	S	2 3 8				SILTY CLAY	Gray	Stiff	Moist, +PL	24.0 982.1
10	S	9 11 17	F	ML	22	SILT and SAND, fine	Gray	Medium dense	Moist, NP	25.5 980.6
11	S	8 12 12	F							33.0 973.1
						END OF BORING				
						WELL DETAILS				
						Casing:				
						0-22.5' Solid 2" pvc casing (threaded joints)				
						22.5-32.5' pvc screen (0.010 inch slots)				
						Backfill:				
						Screen backfilled w/pea gravel.				
						20 lb. bentonite above gravel pack and 50 lb. near surface				
						Remaining annulus backfilled with auger cuttings.				
						Other:				
						4" steel protective casing cemented in at surface.				
						30 minutes well development (air injection)				
						B. Camlin				

Pennsylvania

DRILLER

MB REP B. Camlin

BILLING CO.

SHEET 2 of 2

2-82

NG NO. W-3

S NO. W-4CT Alside, Inc.ION Akron, OH S.O. NO. 14298-01-ARA

RKS _____

1982

DATE	PROGRESS	WEATHER	WATER DEPTH
11-9	0-31.5	cloudy, cool	12.3
11-10			13.9
11-12			12.8

0 hr.
24 hr.

See map for

RIG Acker AD-11 Truck MountedAUGER SIZE 4" I.D. Hollow
stemmed

location

SAMPLER SIZE 1-3/8" I.D. HAMMER WT. 140#FALL 30"ICE EL. 1015.3CASING SIZE AugersHAMMER WT. ---FALL ---

DRILL RECORD

VISUAL DESCRIPTION - SOIL

DEPTH (FT.)	SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC. (FT.)	UNIFIED CLASS.	LAB. MOISTURE CONTENT (%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
0.0	1	S	3	6	F		SILTY CLAY, trace fine sand, trace gravel (FILL)	Brown	Stiff	Damp, -PL	
1.5											
3.0											1012.3
0.0	2	S	3	1	F		SILTY CLAY	Gray some brown	Soft	Moist, +PL (water @ 2.5')	
5.0											
6.0											1009.3
0.0	3	S	6	12	F		SILTY CLAY	Brown	Very stiff	Damp, -PL	
5.0											
9.0											
0.5	4	S	3	11	F	ML 17					
1.0											
0.0											
0.5	5	S	3	6	F						
1.0											

DRILLING CO. PennsylvaniaDRILLER B. GallihueMB REP. B. CamlinRING NO. W-4SHEET 1 of 2

2-82

10/19/1992 09:54 FROM MPCA

TO

82162436923 P.08

W-4

PROJECT Alsida. Inc.

DRILL RECORD						VISUAL DESCRIPTION - SOIL					
DL. ... (FT.)	SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC.(FT.)	UNIFIED CLASS.	LAB MOISTURE CONTENT(%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
0	6	S	11	F	ML	13	CLAYEY SILT, trace coarse sand	Brown	Very stiff	Damp, -PL	999.8
5.5			17								
0										18.0	997.3
5	7	S	14	F	ML	12	SILT, some fine sand	Brown	Dense	Damp, NP	
10			20								
										21.0	994.3
15	8	S	38	F			SILTY CLAY	Brown	Hard	Moist, +PL (Sample 8 highly disturbed; had to make two attempts to get recovery)	
20			34								
25	9	S	5	3						25.0	990.3
30			18				SAND, fine, some silt	Brown	Dense	Moist, NP	
35										27.0	988.3
40	10	S	12	F			SAND, fine	Brown	Dense	Moist, NP	
45			20								
50			28								
55	11	S	32	F	SM	22				31.5	983.8
60			22								
65			20								
70							END OF BORING				
75							WELL DETAILS				
80							Casing:				
85							0-21.5' Solid 2" pvc casing (threaded joints)				
90							21.5-31.5' pvc screen (0.010 inch slots)				
95							Backfill:				
100							Screen backfilled w/pea gravel.				
105							40 lb. bentonite above gravel and 50 lb. near surface.				
110							Remaining annulus backfilled with auger cuttings.				
115							Other:				
120							4" protective steel casing cemented in at surface.				
125							30 minutes well development (air injection).				

NG CO. PennsylvaniaDRILLER B. GallihueMB REP B. CamlinRING NO. W-4SHEET 2 of 2

2-82

10/19/1992 09:54 FROM MPCA

TO

82162436923 P.09

ING NO. W-5



ET Alside, Inc.

LOCATION Akron, OH S.D. NO. 14298-01-ARA

PKS

1982

DATE	PROGRESS	WEATHER	WATER DEPTH
11-11	0-60.0	Rain	
11-12			38.5

See map for

RIG Acker AD-11 Truck Mounted

AUGER SIZE 4" I.D. Hollow
Stemmed

location

SAMPLER SIZE 1-3/8" I.D. HAMMER WT. 140#

FALL 30"

FACE EL. 1041.1

CASING SIZE Augers

HAMMER WT. _____

FALL

LL RECORD					VISUAL DESCRIPTION - SOIL					
SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC.(FT.)	UNIFIED CLASS.	LAB. MOISTURE CONTENT(%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
1	S	4 3 4	F			SILTY CLAY	Brown & gray	Medium stiff	Damp, -PL, little organic material 1.5	1039.6
						SILTY CLAY	Brown	Soft to medium stiff	Moist, +PL	
2	S	3 3 3	F							
3	S	2 1 3	F							
4	S	4 3 3	F							

IG CO. Pennsylvania

DRILLER B. Gallihue

MB REP. 3. Camlin

ING NO. W-5

SHEET 1 of 4

2-82

W-5



RING NO. _____

PROJECT Alside, Inc.

BILL RECORD						VISUAL DESCRIPTION - SOIL					
DEPTH (FT.)	SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC. (FT.)	UNIFIED CLASS.	LAB. MOISTURE CONTENT (%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
0.0	6	S	18	F							
6.5			21								
18.0										18.0	1023.1
7.5	7	S	14	F			SILTY CLAY, trace fine gravel	Brown	Very stiff	Damp, -PL	
11.0			17								
22.5	8	S	9	F							
			16								
24.0										24.0	1017.1
9.5	9	S	7	F			SILT, trace clay	Brown	Dense	Damp, NP	
27.0			17								
			29								
27.0										27.0	1014.1
10.5	10	S	8	F			SILTY CLAY, with fine sand laminae	Gray	Very stiff	Damp, -PL	
			14								
30.0										30.0	1011.1
11.5	11	S	10	F			SILTY CLAY	Gray	Hard	Damp, -PL	
33.0			12								
			23								
35.0	12	S	13	F	CL ML	15					
			17								
36.0										36.0	1005.1
37.5	13	S	11	F			SILTY CLAY	Gray	Very stiff	Moist, +PL	
			13								
39.0											
40.5	14	S	8	F			CLAYEY SILT, some fine sand, trace gravel	Brown and gray	Very stiff	Damp, -PL	39.0 1002.1
			10								

RING CO. PennsylvaniaDRILLER B. GallihueMB REP B. CamlinRING NO. W-5SHEET 2 of 4

2-82

W-3

NO.

Ailside, Inc.

RECORD						VISUAL DESCRIPTION - SOIL				
SAMPLE NO.	SAMPLE TYPE	SPI/BLOWS/0.5 FI.	SAMPLE REC.(FI.)	UNIFIED CLASS.	LAB MOISTURE CONTENT(%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
4		12							42.0	999.1
15	S	16 19 23	F			CLAYEY SILT, some fine sand	Gray	Hard	Damp, -PL	45.0 996.1
16	S	9 15 18	F	ML	12	SILT, some fine sand, trace clay, trace gravel	Gray	Dense	Damp, -PL	
17	S	12 16 18	F						51.0	990.1
18	S	8 10 11	F	ML	16	SILT, little clay	Gray	Dense	Moist, NP	54.0 987.1
19	S	25 18 16	F			SILT, little clay, trace fine sand, trace fine gravel	Gray	Dense	Moist, NP	57.0 984.1
20	S	13 15 18	F	SM	25	SAND, fine, little silt	Brown	Dense	Moist, NP	60.0 981.1
						END OF BORING				

CO. Pennsylvania

DRILLER B. Gallihue

MB REP. B. Camlin

IG NO. W-5

SHEET 3 of 4

2-82

BORING NO. W-6PROJECT Alside, Inc.LOCATION Akron, OH S.O. NO. 14298-01-ARA

REMARKS _____

1982

DATE	PROGRESS	WEATHER	WATER DEPTH
11-8	0-46.5	cloudy, cool	
11-9	46.5-50.0	cloudy, cool	37.5
11-10			37.6

0 hr.
24 hr.

See map for

RIG Acker AD-11 Truck MountedAUGER SIZE 4" I.D. Hollow
stemmed

location

SAMPLER SIZE 1-3/8" I.D. HAMMER WT. 140#FALL 30"SURFACE EL. 1037.6CASING SIZE AugersHAMMER WT. —FALL —

DRILL RECORD						VISUAL DESCRIPTION — SOIL					
DEPTH (FT.)	SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC.(FT.)	UNIFIED CLASS.	LAB. MOISTURE CONTENT(%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
0.0	1	S	5	.3			CLAYEY SILT and FINE SAND, trace gravel (FILL)	Brown	Loose	Damp, NP, contains styrofoam fragments	
1.5			4								
			5								
3.0										2.5	
	2	S	3	F			CLAYEY SILT	Gray, trace brown	Stiff	Moist, +PL, trace organic	1035.1
			4								
4.5			7								
6.0										6.0	1031.6
	3	S	4	F			SILTY CLAY	Brown	Very stiff	Damp, -PL	
			8								
7.5			13								
9.0											
	4	S	7	F							
			10								
10.5			12								
12.0											
	5	S	12	F							
			13								
13.5			20								

DRILLING CO. PennsylvaniaDRILLER B. GallihueMB REP. B. CamlinBORING NO. W-6SHEET 1 of 3

2-82

NO. W-6

Alside, Inc.

RECORD						VISUAL DESCRIPTION - SOIL				
SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC.(FT.)	UNIFIED CLASS.	LAB. MOISTURE CONTENT(%)	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
6	S	10 18 21	F			SILTY CLAY, trace fine sand, trace gravel	Brown	Hard	Damp, -PL	18.0 1019.6
7	S	9 11 11	F			SILT AND CLAY	Brown and gray	Very stiff to hard	Damp, -PL	22.0 1015.6
8	S	11 12 20	3			CLAYEY SILT, some fine sand, trace rock fragments	Brown	Hard	Damp, -PL	24.0 1013.6
9	S	8 12 12	F	ML	12	CLAYEY SILT, trace fine sand, trace gravel	Gray	Very stiff	Damp, -PL	27.0 1010.6
10	S	9 14 19	F			SILT, trace clay, trace fine sand, few scattered pebbles	Gray	Medium dense to dense	Damp, NP	
11	S	10 14 13	F	ML CL	12				With thin brown seams of fine sand below 33'± (1004.6)	
12	S	9 21 68	F							36.0 1001.6
13	S	21 53 70	F			SAND, fine, SILT, GRAVEL, coarse	Brown	Very dense	Damp, NP	39.0 998.6
14	S	8 7	F	ML	21	SILT, some fine sand	Gray	Very stiff	Moist, +PL	

G CO. PennsylvaniaDRILLER B. GallihueMB REP. B. CamlinNG NO. W-6SHEET 2 of 3

2-82

DEPTH (FT.)	SAMPLE NO.	SAMPLE TYPE	SPT/BLOWS/0.5 FT.	SAMPLE REC (FT.)	UNIFIED CLASS.	LAB. MOISTURE CONTENT	GRADATION	COLOR	CONSISTENCY OR DENSITY	MOISTURE CONTENT ORGANIC CONTENT PLASTICITY AND OTHER OBSERVATIONS	ELEVATION
0.5			9								
42.0										42.0	995.6
43.5	15	S	12 18 38	F	SM	19	SAND, fine, some silt, trace gravel	Light brown	Very dense	Damp, NP	
5.0										45.0	992.6
45.0	16	S	14 29 53	F			SAND, fine, some gravel, little silt	Gray	Very dense	Damp, NP	
48.0										48.0	989.6
50.0							BEDROCK (?)			Augered; no sample for classification	50.0 987.6
END OF BORING											
WELL DETAILS											
Casing:											
0-38' Solid 2" pvc casing (threaded joints)											
38-48' pvc screen (0.010 inch slots)											
Backfill:											
Screen backfilled with pea gravel.											
20 lb. bentonite above gravel and near surface.											
Remaining annulus backfilled with auger cuttings.											
Other:											
4" steel protective casing cemented in at surface.											
40 minutes well development (air injection).											

DRILLING CO. Pennsylvania DRILLER B. Gallihue MB REP. B. Camlin
 BORING NO. W-6 SHEET 3 of 3 2-82

Attachment 1.0
ANALYTICAL DATA



ecology and environment, inc.

6777 ENGLE ROAD, CLEVELAND, OHIO 44130, TEL. (216) 243-3330

International Specialists in the Environment

MEMORANDUM

DATE: April 7, 1992

TO: Anne A. Busher, Project Manager, E & E, Cleveland, OH *AAB*

FROM: Emily S. Landis, TAT-Geochemist, E & E, Cleveland, OH *esl*

THRU: George M. Albertson, TAT-Chemist, E & E, Cleveland, OH *Gma*

SUBJ: Total and Reactive Cyanide Data Quality Assurance Review,
Alside, Inc. Site, Summit County, OH.

REF: Analytical TDD: T059202804 Project TDD: T059201037
Analytical PAN: EOH0952AAA Project PAN: EOH0952SAA

The data quality assurance review of 2 solid samples taken from the Alside, Inc. site on February 11, 1992 is now complete. The samples were analyzed for total cyanide (Method 9010) and reactive cyanide (Section 7.3.3.2) by Wadsworth/Alert Laboratories, North Canton, Ohio.

The samples were numbered SD4 and SD5, corresponding, respectively, to the laboratory's numbers D2B140028-004 and -005.

Data Qualifications:

I Holding Time: Acceptable.

The laboratory received the samples on February 14, 1992. They were analyzed for total cyanide on February 19, 1992, and for reactive cyanide on February 21, 1992, within the 14-day sample holding time limit.

II Calibration: Acceptable.

A blank and 5 standards were run prior to sample analysis for total cyanide. The standards' true values were not reported, however, the standard curve's correlation coefficient is 1.00. The reactive cyanide method does not require the preparation of standards.

III Blanks: Acceptable.

Method blanks for both total and reactive cyanides were analyzed with the samples. Contamination levels were below detection limits.

IV Matrix Spike (MS)/Matrix Spike Duplicate (MSD):

For total cyanide, a MS and MSD run on sample SD4. The results were out of range on the instrument due to high concentration in the sample. No action is required based on MS/MSD data alone.

V Check Standards: Acceptable.

For total cyanide, the initial check standard had a percent recovery (%R) of 80%; the continuing check standards had 94-102 %R. For reactive cyanide, the check standards had 98-99 %R.

Overall Assessment of Data for Use:

The overall usefulness of the data is based on the criteria outlined in "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (April 1990). Based on the information provided, the data are acceptable for use as reported.



ECOLOGY & ENVIRONMENTAL

SD4 2-11-92 1325

WO #: 45815
LAB #: D2B140028-004
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Cyanide, Reactive	ND	10	mg/kg	SW846 SEC.7.	2/21/92	052041
Cyanide, Total	32	6	mg/kg	SW846 9010	2/18- 2/19/92	049044
Solids, Total (TS)	51	0.5	%	USEPA 160.3	2/17- 2/18/92	049007

NOTE:

AS RECEIVED
ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SD5 2-11-92 1645

WO #: 45822
LAB #: D2B140028-005
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Cyanide, Reactive	ND	10	mg/kg	SW846 SEC.7.	2/21/92	052041
Cyanide, Total	1.3	0.25	mg/kg	SW846 9010	2/18- 2/19/92	049044
Solids, Total (TS)	52	0.5	%	USEPA 160.3	2/17- 2/18/92	049007

NOTE:

AS RECEIVED

ND

(NONE DETECTED)



ecology and environment, inc.

6777 ENGLE ROAD, CLEVELAND, OHIO 44130, TEL. (216) 243-3330

International Specialists in the Environment

M E M O R A N D U M

DATE: April 1, 1992

TO: Anne A. Busher, Project Manager, E & E, Cleveland, OH *AAB*

FROM: Emily S. Landis, TAT-Geochemist, E & E, Cleveland, OH *el*

THRU: George M. Albertson, TAT-Chemist, E & E, Cleveland, OH *GM*

SUBJ: Total Solids Data Quality Assurance Review, Alside, Inc. Site,
Summit County, OH.

REF: Analytical TDD: T059202804

Project TDD: T059201037

Analytical PAN: EOH0952AAA

Project PAN: EOH0952SAA

The data quality assurance review of 2 solid samples taken from the Alside, Inc. site on February 11, 1992 is now complete. The samples were analyzed for total solids by Wadsworth/Alert Laboratories, North Canton, Ohio.

The samples were numbered D1, D2, SD4, SD5, S6, and S7, corresponding, respectively, to the laboratory's numbers D2B140028-001 through -007, less -003.

The laboratory received the samples on February 14, 1992. They were analyzed for total solids February 17-18, 1992.

Overall Assessment of Data for Use:

There are no criteria specified in SW-846 for the evaluation of total solids.



ecology and environment, inc.

6777 ENGLE ROAD, CLEVELAND, OHIO 44130, TEL. (216) 243-3330
International Specialists in the Environment

M E M O R A N D U M

DATE: April 1, 1992
TO: Anne A. Busher, Project Manager, E & E, Cleveland, OH *aaab*
FROM: Emily S. Landis, TAT-Geochemist, E & E, Cleveland, OH *ysl*
THRU: George M. Albertson, TAT-Chemist, E & E, Cleveland, OH *Gma*
SUBJ: Total Solids Data Quality Assurance Review, Alside, Inc. Site,
Summit County, OH.

REF: Analytical TDD: T059202804 Project TDD: T059201037
Analytical PAN: EOH0952AAA Project PAN: EOH0952SAA

The data quality assurance review of 2 solid samples taken from the Alside, Inc. site on February 11, 1992 is now complete. The samples were analyzed for total solids by Wadsworth/Alert Laboratories, North Canton, Ohio.

The samples were numbered D1, D2, SD4, SD5, S6, and S7, corresponding, respectively, to the laboratory's numbers D2B140028-001 through -007, less -003.

The laboratory received the samples on February 14, 1992. They were analyzed for total solids February 17-18, 1992.

Overall Assessment of Data for Use:

There are no criteria specified in OSWER Directive 9360.4-01 for the evaluation of total solids.



ECOLOGY & ENVIRONMENTAL

D1 2-11-92 1355

WO #: 45788
LAB #: D2B140028-001
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Solids, Total (TS)	88	0.5	%	USEPA 160.3	2/17- 2/18/92	049007

NOTE:

AS RECEIVED



ECOLOGY & ENVIRONMENTAL

D2 2-11-92 1420

WO #: 45789
LAB #: D2B140028-002
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Solids, Total (TS)	95	0.5	%	USEPA 160.3	2/17- 2/18/92	049007

NOTE:

AS RECEIVED



ECOLOGY & ENVIRONMENTAL

SD4 2-11-92 1325

WO #: 45815
LAB #: D2B140028-004
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Cyanide, Reactive	ND	10	mg/kg	SW846 SEC.7.	2/21/92	052041
Cyanide, Total	32	6	mg/kg	SW846 9010	2/18- 2/19/92	049044
Solids, Total (TS)	51	0.5	%	USEPA 160.3	2/17- 2/18/92	049007

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SD5 2-11-92 1645

WO #: 45822
LAB #: D2B140028-005
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Cyanide, Reactive	ND	10	mg/kg	SW846 SEC.7.	2/21/92	052041
Cyanide, Total	1.3	0.25	mg/kg	SW846 9010	2/18- 2/19/92	049044
Solids, Total (TS)	52	0.5	%	USEPA 160.3	2/17- 2/18/92	049007

NOTE:

AS RECEIVED
ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

S6 2-11-92 1705

WO #: 45830
LAB #: D2B140028-006
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Solids, Total (TS)	25	0.5	%	USEPA 160.3	2/17- 2/18/92	049007

NOTE:

AS RECEIVED



ECOLOGY & ENVIRONMENTAL

S7 2-11-92 1630

WO #: 45840
LAB #: D2B140028-007
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- INORGANIC ANALYTICAL REPORT -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Solids, Total (TS)	80	0.5	%	USEPA 160.3	2/17- 2/18/92	049007

NOTE:

AS RECEIVED



ecology and environment, inc.

6777 ENGLE ROAD, CLEVELAND, OHIO 44130, TEL. (216) 243-3330
International Specialists in the Environment

MEMORANDUM

DATE: April 1, 1992
TO: Anne A. Busher, Project Manager, E & E, Cleveland, OH *AB*
FROM: Emily S. Landis, TAT-Geochemist, E & E, Cleveland, OH *esl*
THRU: George M. Albertson, TAT-Chemist, E & E, Cleveland, OH *Gima*
SUBJ: Inorganic Metals Data Quality Assurance Review, Alside, Inc.
Site, Summit County, OH.

REF: Analytical TDD: T059202804 Project TDD: T059201037
Analytical PAN: EOH0952AAA Project PAN: EOH0952SAA

The data quality assurance review of 6 solid samples and 1 water sample taken from the Alside site on February 11, 1992 is now complete. Metals analyses (EPA Methods 6010, 7060, 7471, 7840 and 7470) were performed by Wadsworth/Alert Laboratories, North Canton, Ohio.

The samples were numbered: D1, D2, SW3, SD4, SD5, S6, and S7, corresponding to the laboratory's numbers D2B140028-001 through -007, respectively.

Data Qualifications:

I Holding Time: Acceptable.

The samples were received by the laboratory on February 14, 1992 and analyzed February 24, 1992, well within the 6-month holding time for metals and 28-day holding time for mercury.

II Initial & Continuing Calibrations: Acceptable.

Inductively Coupled Plasma (ICP) - A blank and 5 standards were run prior to sample analysis. All the standards were within 90-110 % of their true value.

Cold Vapor (CV) - A blank and 5 standards were run prior to sample analysis for mercury. All the standards were within 80-120 % of their

true value.

Flame Atomic Absorption (FAA) - A blank and 5 standards were run prior to sample analysis for thallium. The standard curves have r values greater than 0.995.

Graphite Furnace Atomic Absorption (GFAA) - A blank and 4 standards were run prior to sample analyses for arsenic and selenium. The standard curves have r values greater than 0.995.

III ICP Interference Check Standards: Acceptable.

The interference check standards for the ICP method were within the accepted range of 80-120 percent recovery (%R) for each matrix.

IV Method Blanks: Acceptable.

A method blank was run for each matrix on each instrument. The results for all were below the instrument detection limit (IDL) except for silver and iron on the solid method blank (1.5 mg/Kg silver and 4 mg/Kg iron). However, sample values for these elements are either greater than 5 times the blank value or not detected, therefore no action is required.

VII ICP Serial Dilutions: Qualified.

The results of serial dilutions are greater than 10% of the original determinations, with the exception of elements Be and Zn in the solid samples and Be in the water sample. These results suggest physical or spectral interferences. Samples whose diluted concentrations were greater than 10 times the IDL and greater than 10% of the original determinations are flagged "J".

VIII GFAA-Specific QC: Acceptable.

No sample results were flagged "E" by the laboratory, which would indicate interferences. The method of standard additions was not required.

IX Additional QC: Acceptable.

Matrix spikes (MS) and matrix spike duplicates (MSD) were run for each analyte for each matrix. Recoveries were within 20 % except for those which were high dilutions. No action is required based on MS/MSD data alone.

Overall Assessment of Data for Use:

The overall usefulness of the data is based on the criteria outlined in "SW-846, Test Methods for Evaluating Solid Waste (U.S. EPA, November 1986). With the information provided, the data are acceptable for use with the qualifications mentioned above.

Data Validation Qualifiers

J The associated numerical value is an estimated quantity because the reported concentrations were less than the required detection limits or quality control criteria were not met.



ECOLOGY & ENVIRONMENTAL

D1 2-11-92 1355

WO #: 45788
LAB #: D2B140028-001
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- REQUESTED METALS -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Aluminum	3,000 J	10	mg/kg	SW846 6010	2/18- 2/24/92	049002
Barium	55 J	0.5	mg/kg	SW846 6010	2/25- 2/26/92	056031
Iron	7,500 J	2.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Thallium	ND	5.0	mg/kg	SW846 7840	2/18- 2/21/92	049002
Silver	ND	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Beryllium	ND	0.25	mg/kg	SW846 6010	2/18- 2/24/92	049002
Cadmium	6.2 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Chromium	21 J	1.0	mg/kg	SW846 6010	2/25- 2/26/92	056031
Copper	7.8 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Nickel	14 J	2.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Lead	45 J	5.0	mg/kg	SW846 6010	2/25- 2/26/92	056031
Antimony	30 J	2.5	mg/kg	SW846 6010	2/25- 2/26/92	056031
Zinc	6,700	12	mg/kg	SW846 6010	2/18- 2/27/92	049002
Arsenic	2.4	0.5	mg/kg	SW846 7060	2/18- 2/20/92	049002
Mercury	ND	0.25	mg/kg	SW846 7471	2/20/92	051001
Selenium	ND	0.5	mg/kg	SW846 7740	2/18- 2/19/92	049002

202
4.1.92



ECOLOGY & ENVIRONMENTAL

D2 2-11-92 1420

WO #: 45789

LAB #: D2B140028-002

MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- REQUESTED METALS -----

PARAMETER	RESULT		REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Aluminum	3,500	J	10	mg/kg	SW846 6010	2/18- 2/24/92	049002
Barium	30	J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Iron	44,000	J	12	mg/kg	SW846 6010	2/18- 2/24/92	049002
Thallium	ND		5.0	mg/kg	SW846 7840	2/18- 2/21/92	049002
Silver	ND		0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Beryllium	ND		0.25	mg/kg	SW846 6010	2/18- 2/24/92	049002
Cadmium	0.7	J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Chromium	32	J	1.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Copper	14	J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Nickel	22		2.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Lead	52	J	5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Antimony	16		10	mg/kg	SW846 6010	2/18- 2/24/92	049002
Zinc	6,200		12	mg/kg	SW846 6010	2/18- 2/24/92	049002
Arsenic	2.3		0.5	mg/kg	SW846 7060	2/18- 2/20/92	049002
Mercury	ND		0.25	mg/kg	SW846 7471	2/20/92	051001
Selenium	ND		0.5	mg/kg	SW846 7740	2/18- 2/19/92	049002

see
4.1.92



ECOLOGY & ENVIRONMENTAL

SW3 2-11-92 1300

WO #: 45806
LAB #: D2B140028-003
MATRIX: WATER

DATE RECEIVED: 2/14/92

----- REQUESTED METALS -----

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION - ANALYSIS DATE</u>	<u>QC BATCH</u>
Aluminum	ND	0.2	mg/l	SW846 6010	2/17- 2/24/92	048057
Barium	0.07 J	0.01	mg/l	SW846 6010	2/17- 2/24/92	048057
Iron	0.68 J	0.05	mg/l	SW846 6010	2/17- 2/24/92	048057
Thallium	ND	0.1	mg/l	SW846 7840	2/17- 2/21/92	048057
Silver	ND	0.01	mg/l	SW846 6010	2/17- 2/24/92	048057
Beryllium	ND	0.005	mg/l	SW846 6010	2/17- 2/24/92	048057
Cadmium	ND	0.01	mg/l	SW846 6010	2/17- 2/24/92	048057
Chromium	ND	0.02	mg/l	SW846 6010	2/17- 2/24/92	048057
Copper	ND	0.01	mg/l	SW846 6010	2/17- 2/24/92	048057
Nickel	ND	0.04	mg/l	SW846 6010	2/17- 2/24/92	048057
Lead	ND	0.1	mg/l	SW846 6010	2/17- 2/24/92	048057
Antimony	ND	0.2	mg/l	SW846 6010	2/17- 2/24/92	048057
Zinc	0.24	0.05	mg/l	SW846 6010	2/17- 2/24/92	048057
Arsenic	ND	0.005	mg/l	SW846 7060	2/17- 2/20/92	048057
Mercury	ND	0.005	mg/l	SW846 7470	2/17- 2/18/92	048057
Selenium	ND	0.005	mg/l	SW846 7740	2/17- 2/19/92	048057

ECOLOGY & ENVIRONMENTAL

SD4 2-11-92 1325

WO #: 45815
LAB #: D2B140028-004
MATRIX: SOLID

DATE RECEIVED: 2/14/92

- - - - - REQUESTED METALS - - - - -

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNIT</u>	<u>METHOD</u>	<u>PREPARATION -</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATC</u>
Aluminum	4,200 J	10	mg/kg	SW846 6010	2/18- 2/24/92	04900
Barium	310 J	0.5	mg/kg	SW846 6010	2/25- 2/26/92	05603
Iron	9,300 J	2.5	mg/kg	SW846 6010	2/18- 2/24/92	04900
Thallium	ND	5.0	mg/kg	SW846 7840	2/18- 2/21/92	04900
Silver	ND	0.5	mg/kg	SW846 6010	2/18- 2/24/92	04900
Beryllium	0.25	0.25	mg/kg	SW846 6010	2/18- 2/24/92	04900
Cadmium	9.2	0.5	mg/kg	SW846 6010	2/18- 2/24/92	04900
Chromium	960 J	1.0	mg/kg	SW846 6010	2/18- 2/24/92	04900
Copper	13 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	04900
Nickel	8.5 J	2.0	mg/kg	SW846 6010	2/18- 2/24/92	04900
Lead	380 J	5.0	mg/kg	SW846 6010	2/25- 2/26/92	05603
Antimony	83 J	10	mg/kg	SW846 6010	2/25- 2/26/92	05603
Zinc	1,500	2.5	mg/kg	SW846 6010	2/18- 2/24/92	04900
Arsenic	3.5	0.5	mg/kg	SW846 7060	2/18- 2/20/92	04900
Mercury	200	125	mg/kg	SW846 7471	2/20/92	05100
Selenium	ND	0.5	mg/kg	SW846 7740	2/18- 2/19/92	04900

rel
4.1.92

NOTE:

AS RECEIVED
ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SD5 2-11-92 1645

WO #: 45822
LAB #: D2B140028-005
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- REQUESTED METALS -----

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Aluminum	3,400 J	10	mg/kg	SW846 6010	2/18- 2/24/92	049002
Barium	41 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Iron	11,000 J	2.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Thallium	ND	5.0	mg/kg	SW846 7840	2/18- 2/21/92	049002
Silver	9.8 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Beryllium	0.25	0.25	mg/kg	SW846 6010	2/18- 2/24/92	049002
Cadmium	0.9 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Chromium	85 J	1.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Copper	28 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Nickel	7.4 J	2.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Lead	24 J	5.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Antimony	ND	10	mg/kg	SW846 6010	2/18- 2/28/92	049002
Zinc	510	2.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Arsenic	2.3	0.5	mg/kg	SW846 7060	2/18- 2/20/92	049002
Mercury	ND	0.25	mg/kg	SW846 7471	2/20/92	051001
Selenium	ND	0.5	mg/kg	SW846 7740	2/18- 2/19/92	049002

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4.1.92



ECOLOGY & ENVIRONMENTAL

S6 2-11-92 1705

WO #: 45830

LAB #: D2B140028-006

MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- REQUESTED METALS -----

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Aluminum	6,200 J	10	mg/kg	SW846 6010	2/18- 2/24/92	049002
Barium	47 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Iron	15,000 J	2.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Thallium	ND	5.0	mg/kg	SW846 7840	2/18- 2/21/92	049002
Silver	ND	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Beryllium	0.50	0.25	mg/kg	SW846 6010	2/18- 2/24/92	049002
Cadmium	ND	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Chromium	28 J	1.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Copper	14 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Nickel	16 J	2.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Lead	25 J	5.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Antimony	ND	10	mg/kg	SW846 6010	2/18- 2/24/92	049002
Zinc	1,200	2.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Arsenic	8.0	0.5	mg/kg	SW846 7060	2/18- 2/20/92	049002
Mercury	ND	0.25	mg/kg	SW846 7471	2/20/92	051001
Selenium	ND	0.5	mg/kg	SW846 7740	2/18- 2/19/92	049002

222
4.1.92



ECOLOGY & ENVIRONMENTAL

S7 2-11-92 1630

WO #: 45840
LAB #: D2B140028-007
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- REQUESTED METALS -----

PARAMETER	RESULT	REPORTING LIMIT	UNIT	METHOD	PREPARATION - ANALYSIS DATE	QC BATCH
Aluminum	3,400 J	10	mg/kg	SW846 6010	2/18- 2/24/92	049002
Barium	140 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Iron	4,000 J	2.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Thallium	ND	5.0	mg/kg	SW846 7840	2/18- 2/21/92	049002
Silver	ND	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Beryllium	ND	0.25	mg/kg	SW846 6010	2/18- 2/24/92	049002
Cadmium	88 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Chromium	19 J	1.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Copper	10 J	0.5	mg/kg	SW846 6010	2/18- 2/24/92	049002
Nickel	30 J	2.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Lead	90 J	5.0	mg/kg	SW846 6010	2/18- 2/24/92	049002
Antimony	250	10	mg/kg	SW846 6010	2/18- 2/24/92	049002
Zinc	6,000	12	mg/kg	SW846 6010	2/18- 2/24/92	049002
Arsenic	1.6	0.5	mg/kg	SW846 7060	2/18- 2/20/92	049002
Mercury	ND	0.25	mg/kg	SW846 7471	2/20/92	051001
Selenium	ND	0.5	mg/kg	SW846 7740	2/18- 2/19/92	049002

see
4.1.92

NOTE:

AS RECEIVED

ND (NONE DETECTED)



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International Specialists in the Environment

MEMORANDUM

DATE: April 16, 1992
TO: Anne Busher, Project Manager, E & E, Cleveland, OH *AB*
FROM: George M. Albertson, TAT-Chemist, E & E, Cleveland, OH *GMA*
THRU: Emily S. Landis, TAT-Geochemist, E & E, Cleveland, OH *ee*
SUBJ: Volatile Organic Data Quality Assurance Review, Alside Inc.
Site, Summit County, Ohio

REF: Analytical TDD: T059202804 Project TDD: T059201037
Analytical PAN: EOH0952AAA Project PAN: EOH0952SAA

The data quality assurance review of 1 water sample collected from the Alside Inc. site on February 11, 1992 has been completed. Analysis for volatile organics (method 8240) was performed by Wadsworth/Alert Laboratories, North Canton, Ohio.

The sample was numbered SW3 with corresponding lab identification number D2B140028-003.

Data Qualifications:

I Holding Time: Acceptable.

The sample was analyzed within the 14 day allowed holding time for water samples for volatile organic analysis.

II GC/MS Tuning: Acceptable.

Bromofluorobenzene (BFB) GC/MS tuning ion abundance criteria was within the established control limits.

III Calibration

A. Initial Calibration: Acceptable.

A 5 point initial calibration was performed with 20, 50, 100, 150 and 200 ug/ml (ppm) standards. All calibration check compounds' average relative response factors (RRFs) were above the required 0.05. The percent standard deviation (%RSD) did not exceed the 30% control limit for any calibration check compound.

B. Continuing Calibration: Acceptable.

All continuing calibration check compounds' RRFs were greater than the required 0.05. All calibration check compounds' percent differences (%D) were below the required 25%.

IV Method Blank: Acceptable.

No contamination above the instrument detection limit (IDL) was detected in the method blank.

V Surrogate Recovery: Acceptable.

All surrogate recoveries were within the control limits.

VI Matrix Spike/Matrix Spike Duplicates: Acceptable.

The lab spiked the sample with low level spike concentrations. All matrix spike (MS) and matrix spike duplicate (MSD) were within the control limits. The relative percent difference (RPD) between MS and MSD percent recoveries (%R) were all within the established advisory control limits.

VII Field Duplicates: Not applicable.

VIII Internal Standard Performance: Acceptable.

Internal standards (IS) area counts were all within the control limits of -50 % to +100%.

IX TCL Compound Identification: Acceptable.

Results were spot checked for correct identification. The sample spectra matched the lab spectra with agreement of relative intensities within 20%.

X Compound Quantitation: Acceptable.

Quantitation calculations were spot checked and recalculated to verify accuracy. The reported sample analyte concentrations and detection limits reflect concentrations, dilutions, sample weight, etc.

XI Tentatively Identified Compounds (TICs): Acceptable.

All TICs are flagged (NJ) as tentatively identified with the exception of those results reported as unknown.

XII System Performance: Acceptable.

Sample and standard chromatograms were spot checked for anomalies; none appeared. Positive results were confirmed.

XIII Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in " SW-846, Test Methods for Evaluating Solid Waste" (USEPA, November 1986). Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

NJ- Presumptive evidence of the material at an estimated quantity.



SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>
45788	D2B140028-001	D1 2-11-92 1355
45789	D2B140028-002	D2 2-11-92 1420
45806	D2B140028-003	SW3 2-11-92 1300
45815	D2B140028-004	SD4 2-11-92 1325
45822	D2B140028-005	SD5 2-11-92 1645
45830	D2B140028-006	S6 2-11-92 1705
45840	D2B140028-007	S7 2-11-92 1630



ANALYTICAL METHODS SUMMARY

Wadsworth/ALERT Laboratories utilizes only USEPA approved methods in analytical work. The methods used for the analyses presented in the following report are listed below.

<u>Parameters</u>	<u>Methods</u>
TCL Volatile Organics	SW846 8240
TCL Semivolatile Organics	SW846 8270
Silver	SW846 6010
Aluminum	SW846 6010
Barium	SW846 6010
Beryllium	SW846 6010
Cadmium	SW846 6010
Chromium	SW846 6010
Copper	SW846 6010
Iron	SW846 6010
Nickel	SW846 6010
Lead	SW846 6010
Antimony	SW846 6010
Zinc	SW846 6010
Arsenic	SW846 7060
Mercury	SW846 7470
Mercury	SW846 7471
Selenium	SW846 7740
Thallium	SW846 7840
Cyanide, Reactive	SW846 SEC.7.3.3.2
Cyanide, Total	SW846 9010
Solids, Total (TS)	USEPA 160.3 MODIFIED

References:

- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, September, 1986.
- USEPA 600/4-79-02, "Methods for Chemical Analysis of Water and Wastes", March, 1983.



ECOLOGY & ENVIRONMENTAL

SW3 2-11-92 1300

WO #: 45806118

LAB #: D2B140028-003

MATRIX: WATER

DATE RECEIVED: 2/14/92

----- TCL VOLATILE ORGANICS -----

PARAMETER	RESULT (ug/l)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acetone	15 J	50	SW846 8240	2/20/92	052025
Benzene	ND	5	SW846 8240	2/20/92	052025
Bromodichloromethane	ND	5	SW846 8240	2/20/92	052025
Bromoform	ND	5	SW846 8240	2/20/92	052025
Bromomethane	ND	10	SW846 8240	2/20/92	052025
2-Butanone	13 J	50	SW846 8240	2/20/92	052025
Carbon disulfide	ND	5	SW846 8240	2/20/92	052025
Carbon tetrachloride	ND	5	SW846 8240	2/20/92	052025
Chlorobenzene	ND	5	SW846 8240	2/20/92	052025
Chloroethane	ND	10	SW846 8240	2/20/92	052025
Chloroform	ND	5	SW846 8240	2/20/92	052025
Chloromethane	ND	10	SW846 8240	2/20/92	052025
Dibromochloromethane	ND	5	SW846 8240	2/20/92	052025
1,1-Dichloroethane	ND	5	SW846 8240	2/20/92	052025
1,2-Dichloroethane	ND	5	SW846 8240	2/20/92	052025
1,1-Dichloroethene	ND	5	SW846 8240	2/20/92	052025
1,2-Dichloroethene, Total	ND	5	SW846 8240	2/20/92	052025
1,2-Dichloropropane	ND	5	SW846 8240	2/20/92	052025
cis-1,3-Dichloropropene	ND	5	SW846 8240	2/20/92	052025
trans-1,3-Dichloropropene	ND	5	SW846 8240	2/20/92	052025
Ethylbenzene	16	5	SW846 8240	2/20/92	052025
2-Hexanone	ND	50	SW846 8240	2/20/92	052025
Methylene Chloride	ND	5	SW846 8240	2/20/92	052025
2-Pentanone, 4-methyl-	170	50	SW846 8240	2/20/92	052025
SURROGATE RECOVERY		%	ACCEPTABLE LIMITS		
1,2-Dichloroethane-d4	83	(76 - 114)			
Toluene-d8	109	(88 - 110)			
Bromofluorobenzene	105	(86 - 115)			

NOTE:

AS RECEIVED

ND (NONE DETECTED)

DETERMINED BY REPLY QUANTIFICATION DIVISION ESTIMATED VALUES



ECOLOGY & ENVIRONMENTAL

SW3 2-11-92 1300

WO #: 45806118
LAB #: D2B140028-003
MATRIX: WATER

DATE RECEIVED: 2/14/92

----- TCL VOLATILE ORGANICS -----

2 OF 2

PARAMETER	RESULT (ug/l)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Styrene	ND	5	SW846 8240	2/20/92	052025
1,1,2,2-Tetrachloroethane	ND	5	SW846 8240	2/20/92	052025
Tetrachloroethene	ND	5	SW846 8240	2/20/92	052025
Toluene	13	5	SW846 8240	2/20/92	052025
1,1,1-Trichloroethane	ND	5	SW846 8240	2/20/92	052025
1,1,2-Trichloroethane	ND	5	SW846 8240	2/20/92	052025
Trichloroethene	ND	5	SW846 8240	2/20/92	052025
Vinyl acetate	ND	50	SW846 8240	2/20/92	052025
Vinyl chloride	ND	10	SW846 8240	2/20/92	052025
Xylenes, Total	150	5	SW846 8240	2/20/92	052025

SURROGATE RECOVERY%ACCEPTABLE LIMITS

1,2-Dichloroethane-d4
Toluene-d8
Bromofluorobenzene

83
109
105

(76 - 114)
(88 - 110)
(86 - 115)

NOTE:

AS RECEIVED

ND (NONE DETECTED)

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

45806

Lab Name: WADS

Contract: 68-D9-0022

Lab Code: WADS

Case No.:

SAS No.:

SDG No.:

Matrix: (soil/water) WATER

Lab Sample ID: 45806

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: VOL1286

Level: (low/med) LOW

Date Received: 2/14/92

% Moisture: not dec. 100.

Date Analyzed: 2/20/92

Column: (pack/cap) CAP

Dilution Factor: 1.00

Number TICs found:

dec 3/12/92
3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

3/2/92 JH

CAS NUMBER	COMPOUND NAME	SCAN RT	EST. CONC.	Q	
1.	ETHYLMETHYL BENZENE ISOMER	700	9	J	JN
2.	TRIMETHYL BENZENE ISOMER	738	14	J	JN
3.	TRIMETHYL BENZENE ISOMER	772	7	J	JN
4.					<i>Yma</i>
5.					<i>3-24-92</i>
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MEMORANDUM

DATE: April 16, 1992
TO: Anne Busher, Project Manager, E & E, Cleveland, OH *AAB*
FROM: George M. Albertson, TAT-Chemist, E & E, Cleveland, OH *GMA*
THRU: Emily S. Landis, TAT-Geochemist, E & E, Cleveland, OH *esl*
SUBJ: Semivolatile Organic Data Quality Assurance Review, Alside
Inc. Site, Summit County, Ohio

REF: Analytical TDD: T059202804 Project TDD: T059201037
Analytical PAN: EOH0952AAA Project PAN: EOH0952SAA

The data quality assurance review of 6 solid samples and 1 water sample collected from the Alside Inc. site on February 11, 1992 has been completed. Analysis for semivolatile organics (method 8270) was performed by Wadsworth/Alert Laboratories, North Canton, Ohio.

The samples were numbered D1, D2, SW3, SD4, SD5, S6 and S7 with corresponding lab identification numbers D2B140028-001 through -007, respectively.

Data Qualifications:

I Holding Time: Acceptable.

The samples were collected on February 11, 1992, extracted on February 16, 1992 and analyzed on February 27, 1992. The holding time was not exceeded by any sample.

II GC/MS Tuning: Acceptable.

Decafluorotriphenylphosphine (DFTPP) GC/MS tuning ion abundance criteria was within the established control limits.

III Calibration

A. Initial Calibration: Acceptable.

A 5 point initial calibration was performed with 20, 50, 80, 120 and 160 ug/ml (ppm) standards prior to sample analysis. All calibration check compounds' average relative response factors (RRFs) were above the required 0.05. The percent relative standard deviation (%RSD) for the calibration check compounds did not exceed the 30% control limit.

B. Continuing Calibration: Qualified.

All continuing calibration RRFs were greater than the required 0.05. All calibration check compounds' percent differences (%D) were below the required 25% with the exception of the following:

<u>Date</u>	<u>Compound</u>	<u>%D</u>
2/19/92	N-nitroso-di-n-propylamine	40.2
2/19/92	Pentachlorophenol	26.6
2/19/92	Di-n-octylphthalate	26.7
2/19/92	Benzo(a)pyrene	28.5
2/19/92	Nitrobenzene-d5	33.9
2/26/92	Phenol	26.0
2/26/92	Di-n-octylphthalate	29.9
2/27/92	2,4,6-trichlorophenol	26.0

All associated positive results are flagged (J) and non-detects (UJ) as estimated.

IV Method Blank: Acceptable.

No contamination above the instrument detection limit (IDL) was detected with the exception of an estimated value for method blank D2B160000-013 for the compound di-n-butylphthalate (57J mg/kg). Since the quantitation limit was 330 mg/kg, it is the professional judgment of this reviewer that no action is required.

V Surrogate Recovery: Qualified.

The surrogate percent recoveries (%R) were all within the control limits with the exception of the method blank for sample SD4 (159%) and the method blank for sample S7 (149%) for the compound terphenyl-d14. Since only one surrogate was outside of the control limits, no action is required. Additionally, the lab reported that the surrogate for sample D1 was diluted out of range due to high analyte concentration.

VI Matrix Spike/Matrix Spike Duplicates: Qualified.

The lab spiked samples D1, SW3 and SD4 with low and medium level spike concentrations. The percent recoveries for (%R) for matrix spike (MS) and matrix spike (MSD) duplicates were all within the control limits with the exception of the MSD for water sample SW3 for the compound pentachlorophenol (120%). The percent differences between the recoveries were all within the control limits with the exception of sample SD4 for the compound pentachlorophenol (48%). No action is required based on MS/MSD data alone. The initial MS performed on sample SW3 was lost in a laboratory accident. The subsequent re-extraction was not spiked with the compounds of interest. Another re-extraction was not possible due to the lack of sample.

VII Field Duplicates: Not applicable.

VIII Internal Standards Performance: Qualified.

The internal standard (IS) area counts are within the established quality control limits of -50% to +100% from the associated calibration standard for all but the following:

<u>Sample ID</u>	<u>Date</u>	<u>Perylene-d12</u>	<u>Chrysene-d12</u>
45815130 (MS)	2/20/92	106137	----
45815131 (MSD)	2/20/92	112230	----
45788114	2/26/92	62605	----
45788120 (MSD)	2/27/92	71009	55248

Positive results associated with sample 45788114 are flagged (J) and non-detects are flagged (UJ) as estimated. IS retention times were within the \pm 30 second control limit.

IX TCL Compound Identification: Acceptable.

Positive results were spot checked for correct identification. The sample compound spectra matched the lab standard with agreement of relative intensities for standards and samples within 20%.

X Compound Quantitation and Reported Detection Limits: Acceptable.

Quantitation calculations were spot checked and recalculated to verify accuracy. The reported sample analyte concentrations and detection limits accurately reflect concentrations, dilutions, sample weights, etc.

XI System Performance: Acceptable.

Sample and standard chromatograms were spot checked for anomalies. Positive results were confirmed.

XII Tentatively Identified Compounds (TICS):

All TIC results are flagged (NJ) as tentatively identified, with the exception of results reported as unknown.

XII Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in "SW-846, Test Methods for Evaluating Solid Waste" (USEPA, November 1986). Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the contract required detection limits or quality control criteria were not met.

NJ- Presumptive evidence of the material at an estimated quantity.

UJ- The material was analyzed for but not detected. The reported detection limit is estimated because quality control criteria were not met.



SAMPLE SUMMARY

The analytical results of the samples listed below are presented on the following pages.

<u>WO #</u>	<u>LABORATORY ID</u>	<u>SAMPLE IDENTIFICATION</u>
45788	D2B140028-001	D1 2-11-92 1355
45789	D2B140028-002	D2 2-11-92 1420
45806	D2B140028-003	SW3 2-11-92 1300
45815	D2B140028-004	SD4 2-11-92 1325
45822	D2B140028-005	SD5 2-11-92 1645
45830	D2B140028-006	S6 2-11-92 1705
45840	D2B140028-007	S7 2-11-92 1630



ANALYTICAL METHODS SUMMARY

Wadsworth/ALERT Laboratories utilizes only USEPA approved methods in analytical work. The methods used for the analyses presented in the following report are listed below.

<u>Parameters</u>	<u>Methods</u>
TCL Volatile Organics	SW846 8240
TCL Semivolatile Organics	SW846 8270
Silver	SW846 6010
Aluminum	SW846 6010
Barium	SW846 6010
Beryllium	SW846 6010
Cadmium	SW846 6010
Chromium	SW846 6010
Copper	SW846 6010
Iron	SW846 6010
Nickel	SW846 6010
Lead	SW846 6010
Antimony	SW846 6010
Zinc	SW846 6010
Arsenic	SW846 7060
Mercury	SW846 7470
Mercury	SW846 7471
Selenium	SW846 7740
Thallium	SW846 7840
Cyanide, Reactive	SW846 SEC.7.3.3.2
Cyanide, Total	SW846 9010
Solids, Total (TS)	USEPA 160.3 MODIFIED

References:

- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, September, 1986.
- USEPA 600/4-79-02, "Methods for Chemical Analysis of Water and Wastes", March, 1983.



ECOLOGY & ENVIRONMENTAL

D1 2-11-92 1355

WO #: 45788114
LAB #: D2B140028-001
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----					
PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Acenaphthylene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Anthracene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Benzo(a)anthracene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Benzo(b)fluoranthene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Benzo(k)fluoranthene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Benzo(ghi)perylene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Benzo(a)pyrene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Benzyl alcohol	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Bis(2-chloroethoxy)methane	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Bis(2-chloroethyl)ether	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Bis(2-chloroisopropyl)ether	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Bis(2-ethylhexyl)phthalate	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
4-Bromophenyl phenyl ether	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Butyl benzyl phthalate	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
4-Chloroaniline	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
2-Chloronaphthalene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
4-Chlorophenyl phenyl ether	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Chrysene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Dibenzo(a,h)anthracene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Dibenzofuran	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
Di-n-butyl phthalate	ND 05 Dma	6,700	SW846 8270	2/16- 2/27/92	047013
1,2-Dichlorobenzene	ND 05 4-2-92	6,700	SW846 8270	2/16- 2/27/92	047013
1,3-Dichlorobenzene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	DIL	(23 - 120)
2-Fluorobiphenyl	DIL	(30 - 115)
Terphenyl-d14	DIL	(18 - 137)
2-Fluorophenol	DIL	(25 - 121)
Phenol-d5	DIL	(24 - 113)
2,4,6-Tribromophenol	DIL	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

D1 2-11-92 1355

WO #: 45788114
LAB #: D2B140028-001
MATRIX: SOLID

DATE RECEIVED: 2/14/92

TCL SEMIVOLATILE ORGANICS

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
3,3-Dichlorobenzidine	ND <i>JS</i>	13,000	SW846 8270	2/16- 2/27/92	047013
Diethyl phthalate	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Dimethyl phthalate	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
2,4-Dinitrotoluene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
2,6-Dinitrotoluene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Di-n-octyl phthalate	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Fluoranthene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Fluorene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Hexachlorobenzene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Hexachlorobutadiene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Hexachlorocyclopentadiene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Hexachloroethane	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Indeno(1,2,3-cd)pyrene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Isophorone	730 <i>J JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
2-Methylnaphthalene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Naphthalene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Nitrobenzene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
2-Nitroaniline	ND <i>JS</i>	32,000	SW846 8270	2/16- 2/27/92	047013
3-Nitroaniline	ND <i>JS</i>	32,000	SW846 8270	2/16- 2/27/92	047013
4-Nitroaniline	ND <i>JS</i>	32,000	SW846 8270	2/16- 2/27/92	047013
N-Nitrosodiphenylamine	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
N-Nitrosodi-n-propylamine	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
Phenanthrene	ND <i>JS</i>	6,700	SW846 8270	2/16- 2/27/92	047013
4-2-92					
SURROGATE RECOVERY		%	ACCEPTABLE LIMITS		
Nitrobenzene-d5	DIL	(23 - 120)			
2-Fluorobiphenyl	DIL	(30 - 115)			
Terphenyl-d14	DIL	(18 - 137)			
2-Fluorophenol	DIL	(25 - 121)			
Phenol-d5	DIL	(24 - 113)			
2,4,6-Tribromophenol	DIL	(19 - 122)			

NOTES:

AS RECEIVED

ND

(NONE DETECTED)

DETECTED, BUT BELOW QUANTIFICATION LIMIT; ESTIMATED VALUE



ECOLOGY & ENVIRONMENTAL

D1 2-11-92 1355

WO #: 45788114

LAB #: D2B140028-001

DATE RECEIVED: 2/14/92

MATRIX: SOLID

----- TCL SEMIVOLATILE ORGANICS -----

3 OF 4

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/kg)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Pyrene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013
1,2,4-Trichlorobenzene	ND 05	6,700	SW846 8270	2/16- 2/27/92	047013

Guma
4-2-92SURROGATE RECOVERY%ACCEPTABLE LIMITS

Nitrobenzene-d5	DIL	(23 - 120)
2-Fluorobiphenyl	DIL	(30 - 115)
Terphenyl-d14	DIL	(18 - 137)
2-Fluorophenol	DIL	(25 - 121)
Phenol-d5	DIL	(24 - 113)
2,4,6-Tribromophenol	DIL	(19 - 122)

NOTE:

AS RECEIVED

ND

(NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

D1 2-11-92 1355

WO #: 45788114
LAB #: D2B140028-001
MATRIX: SOLID

DATE RECEIVED: 2/14/92

TCL SEMIVOLATILE ORGANICS

! OF !

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzoic acid	ND <u>JS</u>	32,000	SW846 8270	2/16- 2/27/92	047013
4-Chloro-3-methylphenol	ND <u>JS</u>	6,700	SW846 8270	2/16- 2/27/92	047013
2-Chlorophenol	ND <u>JS</u>	6,700	SW846 8270	2/16- 2/27/92	047013
2,4-Dichlorophenol	ND <u>JS</u>	6,700	SW846 8270	2/16- 2/27/92	047013
2,4-Dimethylphenol	ND <u>JS</u>	6,700	SW846 8270	2/16- 2/27/92	047013
2,4-Dinitrophenol	ND <u>JS</u>	32,000	SW846 8270	2/16- 2/27/92	047013
4,6-Dinitro- 2-methylphenol	ND <u>JS</u>	32,000	SW846 8270	2/16- 2/27/92	047013
2-Methylphenol	ND <u>JS</u>	6,700	SW846 8270	2/16- 2/27/92	047013
4-Methylphenol	ND <u>JS</u>	6,700	SW846 8270	2/16- 2/27/92	047013
2-Nitrophenol	ND <u>JS</u>	6,700	SW846 8270	2/16- 2/27/92	047013
4-Nitrophenol	ND <u>JS</u>	32,000	SW846 8270	2/16- 2/27/92	047013
Pentachlorophenol	ND <u>JS</u>	32,000	SW846 8270	2/16- 2/27/92	047013
Phenol	ND <u>JS</u>	6,700	SW846 8270	2/16- 2/27/92	047013
2,4,5-Trichlorophenol	ND <u>JS</u>	6,700	SW846 8270	2/16- 2/27/92	047013
2,4,6-Trichlorophenol	ND <u>JS</u>	6,700	SW846 8270	2/16- 2/27/92	047013

Gma 4-2-92

SURROGATE RECOVERY

%

ACCEPTABLE LIMITS

Nitrobenzene-d5	DIL	(23 - 120)
2-Fluorobiphenyl	DIL	(30 - 115)
Terphenyl-d14	DIL	(18 - 137)
2-Fluorophenol	DIL	(25 - 121)
Phenol-d5	DIL	(24 - 113)
2,4,6-Tribromophenol	DIL	(19 - 122)

NOTE:

AS RECEIVED

ND

NONE DETECTED



ECOLOGY & ENVIRONMENTAL

D2 2-11-92 1420

WO #: 45789114

LAB #: D2B140028-002

MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

1 OF 4

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Acenaphthylene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Anthracene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Benzo(a)anthracene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Benzo(b)fluoranthene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Benzo(k)fluoranthene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Benzo(ghi)perylene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Benzo(a)pyrene	ND <i>0.5</i>	20,000	SW846 8270	2/17- 2/20/92	049051
Benzyl alcohol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-chloroethoxy)methane	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-chloroethyl)ether	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-chloroisopropyl)ether	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-ethylhexyl)phthalate	ND	20,000	SW846 8270	2/17- 2/20/92	049051
4-Bromophenyl phenyl ether	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Butyl benzyl phthalate	ND	20,000	SW846 8270	2/17- 2/20/92	049051
4-Chloroaniline	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2-Chloronaphthalene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
4-Chlorophenyl phenyl ether	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Chrysene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Dibenzo(a,h)anthracene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Dibenzofuran	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Di-n-butyl phthalate	ND	20,000	SW846 8270	2/17- 2/20/92	049051
1,2-Dichlorobenzene	ND <i>5ma</i>	20,000	SW846 8270	2/17- 2/20/92	049051
1,3-Dichlorobenzene	ND <i>4-292</i>	20,000	SW846 8270	2/17- 2/20/92	049051

SURROGATE RECOVERY

	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	85	(23 - 120)
2-Fluorobiphenyl	86	(30 - 115)
Terphenyl-d14	123	(18 - 137)
2-Fluorophenol	70	(25 - 121)
Phenol-d5	75	(24 - 113)
2,4,6-Tribromophenol	78	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

D2 2-11-92 1420

WO #: 45789114

LAB #: D2B140028-002

MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

2 37 4

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
3,3-Dichlorobenzidine	ND	40,000	SW846 8270	2/17- 2/20/92	049051
Diethyl phthalate	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Dimethyl phthalate	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dinitrotoluene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,6-Dinitrotoluene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Di-n-octyl phthalate	ND <i>UJ</i>	20,000	SW846 8270	2/17- 2/20/92	049051
Fluoranthene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Fluorene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Hexachlorobenzene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Hexachlorobutadiene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Hexachlorocyclopentadiene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Hexachloroethane	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Indeno(1,2,3-cd)pyrene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Isophorone	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2-Methylnaphthalene	3,600 J	20,000	SW846 8270	2/17- 2/20/92	049051
Naphthalene	3,400 J	20,000	SW846 8270	2/17- 2/20/92	049051
Nitrobenzene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2-Nitroaniline	ND	100,000	SW846 8270	2/17- 2/20/92	049051
3-Nitroaniline	ND	100,000	SW846 8270	2/17- 2/20/92	049051
4-Nitroaniline	ND	100,000	SW846 8270	2/17- 2/20/92	049051
N-Nitrosodiphenylamine	ND	20,000	SW846 8270	2/17- 2/20/92	049051
N-Nitrosodi-n-propylamine	ND <i>UJ</i>	20,000	SW846 8270	2/17- 2/20/92	049051
Phenanthrene	ND <i>Gma</i> <i>4-2-92</i>	20,000	SW846 8270	2/17- 2/20/92	049051
<u>SURROGATE RECOVERY</u>		<u>%</u>	<u>ACCEPTABLE LIMITS</u>		
Nitrobenzene-d5	85	(23 - 120)			
2-Fluorobiphenyl	86	(30 - 115)			
Terphenyl-d14	123	(18 - 137)			
2-Fluorophenol	70	(25 - 121)			
Phenol-d5	75	(24 - 113)			
2,4,6-Tribromophenol	78	(19 - 122)			

NOTE:

AS RECEIVED

ND (NONE DETECTED)

J (DETECTED, BUT BELOW QUANTIFICATION LIMIT; ESTIMATED VALUE)



ECOLOGY & ENVIRONMENTAL

D2 2-11-92 1420

WO #: 45789114
LAB #: D2B140028-002
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Pyrene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
1,2,4-Trichlorobenzene	ND	20,000	SW846 8270	2/17- 2/20/92	049051

SURROGATE RECOVERY%ACCEPTABLE LIMITS

Nitrobenzene-d5	85	(23 - 120)
2-Fluorobiphenyl	86	(30 - 115)
Terphenyl-d14	123	(18 - 137)
2-Fluorophenol	70	(25 - 121)
Phenol-d5	75	(24 - 113)
2,4,6-Tribromophenol	78	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

D2 2-11-92 1420

WO #: 45789114
LAB #: D2B140028-002
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzoic acid	ND	100,000	SW846 8270	2/17- 2/20/92	049051
4-Chloro-3-methylphenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2-Chlorophenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dichlorophenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dimethylphenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dinitrophenol	ND	100,000	SW846 8270	2/17- 2/20/92	049051
4,6-Dinitro- 2-methylphenol	ND	100,000	SW846 8270	2/17- 2/20/92	049051
2-Methylphenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
4-Methylphenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2-Nitrophenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
4-Nitrophenol	ND	100,000	SW846 8270	2/17- 2/20/92	049051
Pentachlorophenol	ND UJ	100,000	SW846 8270	2/17- 2/20/92	049051
Phenol	ND UJ	20,000	SW846 8270	2/17- 2/20/92	049051
2,4,5-Trichlorophenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,4,6-Trichlorophenol	ND UJ	20,000	SW846 8270	2/17- 2/20/92	049051

Jma 4-2-92

SURROGATE RECOVERY

	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	85	(23 - 120)
2-Fluorobiphenyl	86	(30 - 115)
Terphenyl-d14	123	(18 - 137)
2-Fluorophenol	70	(25 - 121)
Phenol-d5	75	(24 - 113)
2,4,6-Tribromophenol	78	(19 - 122)

NOTE:

AS RECEIVED
ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SW3 2-11-92 1300

WO #: 45806114
LAB #: D2B1+0028-003
MATRIX: WATER

DATE RECEIVED: 2/14/92

TCL SEMI-VOLATILE ORGANICS

PARAMETER RESULT (ug/l) REPORTING LIMIT METHOD ANALYSIS DATE EXTRACTION- QC BATCH

Acenaphthene ND 10 SW846 8270 2/15- 2/19/92 046004
Acenaphthylene ND 10 SW846 8270 2/15- 2/19/92 046004
Anthracene ND 10 SW846 8270 2/15- 2/19/92 046004
Benzo(a)anthracene ND 10 SW846 8270 2/15- 2/19/92 046004
Benzo(b)fluoranthene ND 10 SW846 8270 2/15- 2/19/92 046004
Benzo(k)fluoranthene ND 10 SW846 8270 2/15- 2/19/92 046004
Benzo(ghi)perylene ND 10 SW846 8270 2/15- 2/19/92 046004
Benzo(a)pyrene ND 10 SW846 8270 2/15- 2/19/92 046004
Benzyl alcohol ND 10 SW846 8270 2/15- 2/19/92 046004

Bis(2-chloroethoxy)methane ND 10 SW846 8270 2/15- 2/19/92 046004
Bis(2-chloroethyl)ether ND 10 SW846 8270 2/15- 2/19/92 046004
Bis(2-chloroisopropyl)ether ND 10 SW846 8270 2/15- 2/19/92 046004
Bis(2-ethylhexyl)phthalate ND 10 SW846 8270 2/15- 2/19/92 046004
1-Bromophenyl phenyl ether ND 10 SW846 8270 2/15- 2/19/92 046004
4-Chloroaniline ND 10 SW846 8270 2/15- 2/19/92 046004
2-Chloronaphthalene ND 10 SW846 8270 2/15- 2/19/92 046004
4-Chlorophenyl phenyl ether ND 10 SW846 8270 2/15- 2/19/92 046004
Chrysene ND 10 SW846 8270 2/15- 2/19/92 046004
Dibenzo(a,h)anthracene ND 10 SW846 8270 2/15- 2/19/92 046004
Dibenzofuran ND 10 SW846 8270 2/15- 2/19/92 046004
Di-n-butyl phthalate ND 10 SW846 8270 2/15- 2/19/92 046004
1,2-Dichlorobenzene ND 10 SW846 8270 2/15- 2/19/92 046004
1,3-Dichlorobenzene ND 10 SW846 8270 2/15- 2/19/92 046004

SURROGATE RECOVERY

% ACCEPTABLE LIMITS

Nitrobenzene-d5 74 (35 - 114)
2-Fluorobiphenyl 62 (43 - 116)
Terphenyl-d14 114 (33 - 141)
2-Fluorophenol 63 (21 - 100)
Phenol-d5 65 (10 - 94)
2,4,6-Tribromophenol 102 (10 - 123)

NOTE:

AS RECEIVED
ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SW3 2-11-92 1300

WO #: 45806114
LAB #: D2B140028-003
MATRIX: WATER

DATE RECEIVED: 2/14/92

TCL SEMIVOLATILE ORGANICS

PARAMETER	RESULT (ug/l)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	10	SW846 8270	2/15- 2/19/92	046004
3,3-Dichlorobenzidine	ND	20	SW846 8270	2/15- 2/19/92	046004
Diethyl phthalate	ND	10	SW846 8270	2/15- 2/19/92	046004
Dimethyl phthalate	ND	10	SW846 8270	2/15- 2/19/92	046004
2,4-Dinitrotoluene	ND	10	SW846 8270	2/15- 2/19/92	046004
2,6-Dinitrotoluene	ND	10	SW846 8270	2/15- 2/19/92	046004
Di-n-octyl phthalate	ND	10	SW846 8270	2/15- 2/19/92	046004
Fluoranthene	ND	10	SW846 8270	2/15- 2/19/92	046004
Fluorene	ND	10	SW846 8270	2/15- 2/19/92	046004
Hexachlorobenzene	ND	10	SW846 8270	2/15- 2/19/92	046004
Hexachlorobutadiene	ND	10	SW846 8270	2/15- 2/19/92	046004
Hexachlorocyclopentadiene	ND	10	SW846 8270	2/15- 2/19/92	046004
Hexachloroethane	ND	10	SW846 8270	2/15- 2/19/92	046004
Indeno(1,2,3-cd)pyrene	ND	10	SW846 8270	2/15- 2/19/92	046004
Isophorone	ND	10	SW846 8270	2/15- 2/19/92	046004
2-Methylnaphthalene	ND	10	SW846 8270	2/15- 2/19/92	046004
Naphthalene	ND	10	SW846 8270	2/15- 2/19/92	046004
Nitrobenzene	ND	10	SW846 8270	2/15- 2/19/92	046004
2-Nitroaniline	ND	50	SW846 8270	2/15- 2/19/92	046004
3-Nitroaniline	ND	50	SW846 8270	2/15- 2/19/92	046004
4-Nitroaniline	ND	50	SW846 8270	2/15- 2/19/92	046004
N-Nitrosodiphenylamine	ND	10	SW846 8270	2/15- 2/19/92	046004
N-Nitrosodi-n-propylamine	ND	10	SW846 8270	2/15- 2/19/92	046004
Phenanthrene	ND	10	SW846 8270	2/15- 2/19/92	046004
<i>Dma 4-2-92</i>					
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Nitrobenzene-d5	74	(35 - 114)			
2-Fluorobiphenyl	62	(43 - 116)			
Terphenyl-d14	114	(33 - 141)			
2-Fluorophenol	63	(21 - 100)			
Phenol-d5	65	(10 - 94)			
2,4,6-Tribromophenol	102	(10 - 123)			

NOTE:

AS RECEIVED
ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SW3 2-11-92 1300

WO #: 45806114
LAB #: D2B140028-003
MATRIX: WATER

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

3 OF 4

<u>PARAMETER</u>	<u>RESULT</u> (ug/l)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Pyrene	ND	10	SW846 8270	2/15- 2/19/92	046004
1,2,4-Trichlorobenzene	ND	10	SW846 8270	2/15- 2/19/92	046004

SURROGATE RECOVERY

%

ACCEPTABLE LIMITS

Nitrobenzene-d5	74	(35 - 114)
2-Fluorobiphenyl	62	(43 - 116)
Terphenyl-d14	114	(33 - 141)
2-Fluorophenol	63	(21 - 100)
Phenol-d5	65	(10 - 94)
2,4,6-Tribromophenol	102	(10 - 123)

NOTE:

AS RECEIVED
ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SW3 2-11-92 1300

WO #: 45806114
LAB #: D2B140028-003
MATRIX: WATER

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT (ug/l)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzoic acid	ND	50	SW846 8270	2/15- 2/19/92	046004
4-Chloro-3-methylphenol	ND	10	SW846 8270	2/15- 2/19/92	046004
2-Chlorophenol	ND	10	SW846 8270	2/15- 2/19/92	046004
2,4-Dichlorophenol	ND	10	SW846 8270	2/15- 2/19/92	046004
2,4-Dimethylphenol	ND	10	SW846 8270	2/15- 2/19/92	046004
2,4-Dinitrophenol	ND	50	SW846 8270	2/15- 2/19/92	046004
4,6-Dinitro- 2-methylphenol	ND	50	SW846 8270	2/15- 2/19/92	046004
2-Methylphenol	ND	10	SW846 8270	2/15- 2/19/92	046004
4-Methylphenol	ND	10	SW846 8270	2/15- 2/19/92	046004
2-Nitrophenol	ND	10	SW846 8270	2/15- 2/19/92	046004
4-Nitrophenol	ND	50	SW846 8270	2/15- 2/19/92	046004
Pentachlorophenol	ND UJ	50	SW846 8270	2/15- 2/19/92	046004
Phenol	31 J	10	SW846 8270	2/15- 2/19/92	046004
2,4,5-Trichlorophenol	ND UJ	10	SW846 8270	2/15- 2/19/92	046004
2,4,6-Trichlorophenol	ND UJ	10	SW846 8270	2/15- 2/19/92	046004

Jma 4-2-92

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	74	(35 - 114)
2-Fluorobiphenyl	62	(43 - 116)
Terphenyl-d14	114	(33 - 141)
2-Fluorophenol	63	(21 - 100)
Phenol-d5	65	(10 - 94)
2,4,6-Tribromophenol	102	(10 - 123)

NOTE:

AS RECEIVED
ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SD4 2-11-92 1325

WO #: 45815114
LAB #: D2B140028-004
MATRIX: SOLID

DATE RECEIVED: 2/14/92

TCL SEMIVOLATILE ORGANICS

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Acenaphthylene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Anthracene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Benzo(a)anthracene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Benzo(b)fluoranthene	NT	80,000	SW846 8270	2/17- 2/20/92	049051
Benzo(k)fluoranthene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Benzo(ghi)perylene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Benzo(a)pyrene	ND UJ	80,000	SW846 8270	2/17- 2/20/92	049051
Benzyl alcohol	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-chloroethoxy)methane	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-chloroethyl)ether	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-chloroisopropyl)ether	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-ethylhexyl)phthalate	60,000 J	80,000	SW846 8270	2/17- 2/20/92	049051
4-Bromophenyl phenyl ether	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Butyl benzyl phthalate	ND	80,000	SW846 8270	2/17- 2/20/92	049051
4-Chloroaniline	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2-Chloronaphthalene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
4-Chlorophenyl phenyl ether	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Chrysene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Dibenzo(a,h)anthracene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Dibenzofuran	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Di-n-butyl phthalate	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Dichlorobenzene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
1,2-Dichlorobenzene	ND	80,000	SW846 8270	2/17- 2/20/92	049051

SURROGATE RECOVERY

Nitrobenzene-d5	DIL	(23 - 120)
2-Fluorobiphenyl	DIL	(30 - 115)
Terphenyl-d14	DIL	(18 - 137)
2-Fluorophenol	DIL	(25 - 121)
Phenol-d5	DIL	(24 - 113)
2,4,6-Tribromophenol	DIL	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)

RECOVERED, BUT BELOW QUANTIFICATION LIMITS ESTIMATED VALUES

ACCEPTABLE LIMITS



ECOLOGY & ENVIRONMENTAL

SD4 2-11-92 1325

WO #: 45815114

LAB #: D2B140028-004

MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

2 OF 4

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
3,3-Dichlorobenzidine	ND	160,000	SW846 8270	2/17- 2/20/92	049051
Diethyl phthalate	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Dimethyl phthalate	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dinitrotoluene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2,6-Dinitrotoluene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Di-n-octyl phthalate	12,000 J	80,000	SW846 8270	2/17- 2/20/92	049051
Fluoranthene	10,000 J	80,000	SW846 8270	2/17- 2/20/92	049051
Fluorene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Hexachlorobenzene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Hexachlorobutadiene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Hexachlorocyclopentadiene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Hexachloroethane	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Indeno(1,2,3-cd)pyrene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
Isophorone	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2-Methylnaphthalene	18,000 J	80,000	SW846 8270	2/17- 2/20/92	049051
Naphthalene	340,000	80,000	SW846 8270	2/17- 2/20/92	049051
Nitrobenzene	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2-Nitroaniline	ND	400,000	SW846 8270	2/17- 2/20/92	049051
3-Nitroaniline	ND	400,000	SW846 8270	2/17- 2/20/92	049051
4-Nitroaniline	ND	400,000	SW846 8270	2/17- 2/20/92	049051
N-Nitrosodiphenylamine	ND	80,000	SW846 8270	2/17- 2/20/92	049051
N-Nitrosodi-n-propylamine	ND UJ	80,000	SW846 8270	2/17- 2/20/92	049051
Phenanthrene	ND	80,000	SW846 8270	2/17- 2/20/92	049051

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Nitrobenzene-d5	DIL	(23 - 120)			
2-Fluorobiphenyl	DIL	(30 - 115)			
Terphenyl-d14	DIL	(18 - 137)			
2-Fluorophenol	DIL	(25 - 121)			
Phenol-d5	DIL	(24 - 113)			
2,4,6-Tribromophenol	DIL	(19 - 122)			

NOTE:

AS RECEIVED

ND (NONE DETECTED)

DETECTED, BUT BELOW QUANTITATION LIMIT: ESTIMATED VALUE



ECOLOGY & ENVIRONMENTAL

SD4 2-11-92 1325

WO #: 45815114
LAB #: D2B140028-004
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

3 OF 4

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Pyrene	8,800 J	80,000	SW846 8270	2/17- 2/20/92	049051
1,2,4-Trichlorobenzene	ND	80,000	SW846 8270	2/17- 2/20/92	049051

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	DIL	(23 - 120)
2-Fluorobiphenyl	DIL	(30 - 115)
Terphenyl-d14	DIL	(18 - 137)
2-Fluorophenol	DIL	(25 - 121)
Phenol-d5	DIL	(24 - 113)
2,4,6-Tribromophenol	DIL	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)

1 DETECTED, BUT BELOW QUANTITATION LIMIT: ESTIMATED VALUE



ECOLOGY & ENVIRONMENTAL

SD4 2-11-92 1325

WO #: 45815114
LAB #: D2B140028-004
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzoic acid	ND	400,000	SW846 8270	2/17- 2/20/92	049051
4-Chloro-3-methylphenol	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2-Chlorophenol	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dichlorophenol	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dimethylphenol	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dinitrophenol	ND	400,000	SW846 8270	2/17- 2/20/92	049051
4,6-Dinitro- 2-methylphenol	ND	400,000	SW846 8270	2/17- 2/20/92	049051
2-Methylphenol	ND	80,000	SW846 8270	2/17- 2/20/92	049051
4-Methylphenol	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2-Nitrophenol	ND	80,000	SW846 8270	2/17- 2/20/92	049051
4-Nitrophenol	ND	400,000	SW846 8270	2/17- 2/20/92	049051
Pentachlorophenol	ND UT	400,000	SW846 8270	2/17- 2/20/92	049051
Phenol	ND UT	80,000	SW846 8270	2/17- 2/20/92	049051
2,4,5-Trichlorophenol	ND	80,000	SW846 8270	2/17- 2/20/92	049051
2,4,6-Trichlorophenol	ND UT	80,000	SW846 8270	2/17- 2/20/92	049051

Dma 4-2-92

SURROGATE RECOVERY

%

ACCEPTABLE LIMITS

Nitrobenzene-d5	DIL	(23 - 120)
2-Fluorobiphenyl	DIL	(30 - 115)
Terphenyl-d14	DIL	(18 - 137)
2-Fluorophenol	DIL	(25 - 121)
Phenol-d5	DIL	(24 - 113)
2,4,6-Tribromophenol	DIL	(19 - 122)

NOTE:

AS RECEIVED

ND

(NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SD5 2-11-92 1645

WO #: 45822114
LAB #: D2B140028-005
MATRIX: SOLID

DATE RECEIVED: 2/14/92

TCL SEMIVOLATILE ORGANICS

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	670	SW846 8270	2/16- 2/20/92	047013
Acenaphthylene	ND	670	SW846 8270	2/16- 2/20/92	047013
Anthracene	ND	670	SW846 8270	2/16- 2/20/92	047013
Benzo(a)anthracene	ND	670	SW846 8270	2/16- 2/20/92	047013
Benzo(b)fluoranthene	ND	670	SW846 8270	2/16- 2/20/92	047013
Benzo(k)fluoranthene	ND	670	SW846 8270	2/16- 2/20/92	047013
Benzo(ghi)perylene	ND	670	SW846 8270	2/16- 2/20/92	047013
Benzo(a)pyrene	ND	670	SW846 8270	2/16- 2/20/92	047013
Benzyl alcohol	ND	670	SW846 8270	2/16- 2/20/92	047013
Bis(2-chloroethoxy)methane	ND	670	SW846 8270	2/16- 2/20/92	047013
Bis(2-chloroethyl)ether	ND	670	SW846 8270	2/16- 2/20/92	047013
Bis(2-chloroisopropyl)ether	ND	670	SW846 8270	2/16- 2/20/92	047013
Bis(2-ethylhexyl)phthalate	130 J	670	SW846 8270	2/16- 2/20/92	047013
4-Bromophenyl phenyl ether	ND	670	SW846 8270	2/16- 2/20/92	047013
Butyl benzyl phthalate	ND	670	SW846 8270	2/16- 2/20/92	047013
4-Chloroaniline	ND	670	SW846 8270	2/16- 2/20/92	047013
2-Chloronaphthalene	ND	670	SW846 8270	2/16- 2/20/92	047013
4-Chlorophenyl phenyl ether	ND	670	SW846 8270	2/16- 2/20/92	047013
Chrysene	ND	670	SW846 8270	2/16- 2/20/92	047013
Dibenzo(a,h)anthracene	ND	670	SW846 8270	2/16- 2/20/92	047013
Dibenzofuran	ND	670	SW846 8270	2/16- 2/20/92	047013
Di-n-butyl phthalate	ND	670	SW846 8270	2/16- 2/20/92	047013
1,2-Dichlorobenzene	ND	670	SW846 8270	2/16- 2/20/92	047013
1,3-Dichlorobenzene	ND	670	SW846 8270	2/16- 2/20/92	047013
SURROGATE RECOVERY		ACCEPTABLE LIMITS			
Nitrobenzene-d5	69	(23 - 120)			
2-Fluorobiphenyl	69	(30 - 115)			
Terphenyl-d14	115	(18 - 137)			
2-Fluorophenol	43	(25 - 121)			
Phenol-d5	52	(24 - 113)			
2,4,6-Tribromophenol	47	(19 - 122)			

NOTE:

AS RECEIVED

ND

(NONE DETECTED)

RECOVERED, BUT BELOW QUANTIFICATION LIMITS; ESTIMATED VALUES



ECOLOGY & ENVIRONMENTAL

SD5 2-11-92 1645

WO #: 45822114
LAB #: D2B140028-005
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----					
PARAMETER	RESULT	REPORTING	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
	(ug/kg)	LIMIT			
1,4-Dichlorobenzene	ND	670	SW846 8270	2/16- 2/20/92	047013
3,3-Dichlorobenzidine	ND	1,300	SW846 8270	2/16- 2/20/92	047013
Diethyl phthalate	ND	670	SW846 8270	2/16- 2/20/92	047013
Dimethyl phthalate	ND	670	SW846 8270	2/16- 2/20/92	047013
2,4-Dinitrotoluene	ND	670	SW846 8270	2/16- 2/20/92	047013
2,6-Dinitrotoluene	ND	670	SW846 8270	2/16- 2/20/92	047013
Di-n-octyl phthalate	ND <i>JS</i>	670	SW846 8270	2/16- 2/20/92	047013
Fluoranthene	ND	670	SW846 8270	2/16- 2/20/92	047013
Fluorene	ND	670	SW846 8270	2/16- 2/20/92	047013
Hexachlorobenzene	ND	670	SW846 8270	2/16- 2/20/92	047013
Hexachlorobutadiene	ND	670	SW846 8270	2/16- 2/20/92	047013
Hexachlorocyclopentadiene	ND	670	SW846 8270	2/16- 2/20/92	047013
Hexachloroethane	ND	670	SW846 8270	2/16- 2/20/92	047013
Indeno(1,2,3-cd)pyrene	ND	670	SW846 8270	2/16- 2/20/92	047013
Isophorone	ND	670	SW846 8270	2/16- 2/20/92	047013
2-Methylnaphthalene	ND	670	SW846 8270	2/16- 2/20/92	047013
Naphthalene	ND	670	SW846 8270	2/16- 2/20/92	047013
Nitrobenzene	ND	670	SW846 8270	2/16- 2/20/92	047013
2-Nitroaniline	ND	3,200	SW846 8270	2/16- 2/20/92	047013
3-Nitroaniline	ND	3,200	SW846 8270	2/16- 2/20/92	047013
4-Nitroaniline	ND	3,200	SW846 8270	2/16- 2/20/92	047013
N-Nitrosodiphenylamine	ND	670	SW846 8270	2/16- 2/20/92	047013
N-Nitrosodi-n-propylamine	ND <i>JS</i>	670	SW846 8270	2/16- 2/20/92	047013
Phenanthrene	ND	670	SW846 8270	2/16- 2/20/92	047013
<i>Drma 4-2-92</i>					
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Nitrobenzene-d5	69	(23 - 120)			
2-Fluorobiphenyl	69	(30 - 115)			
Terphenyl-d14	115	(18 - 137)			
2-Fluorophenol	43	(25 - 121)			
Phenol-d5	52	(24 - 113)			
2,4,6-Tribromophenol	47	(19 - 122)			

NOTE:

4S RECOVERED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SD5 2-11-92 1645

WO #: 45822114
LAB #: D2B140028-005
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

<u>PARAMETER</u>	<u>RESULT</u> <u>(ug/kg)</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Pyrene	ND	670	SW846 8270	2/16- 2/20/92	047013
1,2,4-Trichlorobenzene	ND	670	SW846 8270	2/16- 2/20/92	047013

SURROGATE RECOVERY%ACCEPTABLE LIMITS

Nitrobenzene-d5	69	(23 - 120)
2-Fluorobiphenyl	69	(30 - 115)
Terphenyl-d14	115	(18 - 137)
2-Fluorophenol	43	(25 - 121)
Phenol-d5	52	(24 - 113)
2,4,6-Tribromophenol	47	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

SD5 2-11-92 1645

WO #: 45822114
LAB #: D2B140028-005
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzoic acid	ND	3,200	SW846 8270	2/16- 2/20/92	047013
4-Chloro-3-methylphenol	ND	670	SW846 8270	2/16- 2/20/92	047013
2-Chlorophenol	ND	670	SW846 8270	2/16- 2/20/92	047013
2,4-Dichlorophenol	ND	670	SW846 8270	2/16- 2/20/92	047013
2,4-Dimethylphenol	ND	670	SW846 8270	2/16- 2/20/92	047013
2,4-Dinitrophenol	ND	3,200	SW846 8270	2/16- 2/20/92	047013
4,6-Dinitro- 2-methylphenol	ND	3,200	SW846 8270	2/16- 2/20/92	047013
2-Methylphenol	ND	670	SW846 8270	2/16- 2/20/92	047013
4-Methylphenol	ND	670	SW846 8270	2/16- 2/20/92	047013
2-Nitrophenol	ND	670	SW846 8270	2/16- 2/20/92	047013
4-Nitrophenol	ND	3,200	SW846 8270	2/16- 2/20/92	047013
Pentachlorophenol	ND UJ	3,200	SW846 8270	2/16- 2/20/92	047013
Phenol	ND UJ	670	SW846 8270	2/16- 2/20/92	047013
2,4,5-Trichlorophenol	ND	670	SW846 8270	2/16- 2/20/92	047013
2,4,6-Trichlorophenol	ND UJ	670	SW846 8270	2/16- 2/20/92	047013

gamma 4-2-92

SURROGATE RECOVERY%ACCEPTABLE LIMITS

Nitrobenzene-d5	69	(23 - 120)
2-Fluorobiphenyl	69	(30 - 115)
Terphenyl-d14	115	(18 - 137)
2-Fluorophenol	43	(25 - 121)
Phenol-d5	52	(24 - 113)
2,4,6-Tribromophenol	47	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

S6 2-11-92 1705

WO #: 45830114
LAB #: D2B140028-006
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	20,000	SW846 8270	2/20/92	047013
Acenaphthylene	ND	20,000	SW846 8270	2/20/92	047013
Anthracene	ND	20,000	SW846 8270	2/20/92	047013
Benzo(a)anthracene	ND	20,000	SW846 8270	2/20/92	047013
Benzo(b)fluoranthene	ND	20,000	SW846 8270	2/20/92	047013
Benzo(k)fluoranthene	ND	20,000	SW846 8270	2/20/92	047013
Benzo(ghi)perylene	ND	20,000	SW846 8270	2/20/92	047013
Benzo(a)pyrene	ND <i>UT</i>	20,000	SW846 8270	2/20/92	047013
Benzyl alcohol	ND	20,000	SW846 8270	2/20/92	047013
Bis(2-chloroethoxy)methane	ND	20,000	SW846 8270	2/20/92	047013
Bis(2-chloroethyl)ether	ND	20,000	SW846 8270	2/20/92	047013
Bis(2-chloroisopropyl)ether	ND	20,000	SW846 8270	2/20/92	047013
Bis(2-ethylhexyl)phthalate	ND	20,000	SW846 8270	2/20/92	047013
4-Bromophenyl phenyl ether	ND	20,000	SW846 8270	2/20/92	047013
Butyl benzyl phthalate	ND	20,000	SW846 8270	2/20/92	047013
4-Chloroaniline	ND	20,000	SW846 8270	2/20/92	047013
2-Chloronaphthalene	ND	20,000	SW846 8270	2/20/92	047013
4-Chlorophenyl phenyl ether	ND	20,000	SW846 8270	2/20/92	047013
Chrysene	ND	20,000	SW846 8270	2/20/92	047013
Dibenzo(a,h)anthracene	ND	20,000	SW846 8270	2/20/92	047013
Dibenzofuran	ND	20,000	SW846 8270	2/20/92	047013
Di-n-butyl phthalate	ND	20,000	SW846 8270	2/20/92	047013
1,2-Dichlorobenzene	ND	20,000	SW846 8270	2/20/92	047013
1,3-Dichlorobenzene	ND	20,000	SW846 8270	2/20/92	047013
<i>Uma 4-2-92</i>					
<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>			
Nitrobenzene-d5	61	(23 - 120)			
2-Fluorobiphenyl	67	(30 - 115)			
Terphenyl-d14	99	(18 - 137)			
2-Fluorophenol	43	(25 - 121)			
Phenol-d5	61	(24 - 113)			
2,4,6-Tribromophenol	48	(19 - 122)			

NOTE:

AS RECEIVED
ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

S6 2-11-92 1705

WO #: 45830114
LAB #: D2B140028-006
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	2 OF 4	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
	RESULT (ug/kg)				
1,4-Dichlorobenzene	ND	20,000	SW846 8270	2/20/92	047013
3,3-Dichlorobenzidine	ND	40,000	SW846 8270	2/20/92	047013
Diethyl phthalate	ND	20,000	SW846 8270	2/20/92	047013
Dimethyl phthalate	ND	20,000	SW846 8270	2/20/92	047013
2,4-Dinitrotoluene	ND	20,000	SW846 8270	2/20/92	047013
2,6-Dinitrotoluene	ND	20,000	SW846 8270	2/20/92	047013
Di-n-octyl phthalate	ND <i>UT</i>	20,000	SW846 8270	2/20/92	047013
Fluoranthene	ND	20,000	SW846 8270	2/20/92	047013
Fluorene	ND	20,000	SW846 8270	2/20/92	047013
Hexachlorobenzene	ND	20,000	SW846 8270	2/20/92	047013
Hexachlorobutadiene	ND	20,000	SW846 8270	2/20/92	047013
Hexachlorocyclopentadiene	ND	20,000	SW846 8270	2/20/92	047013
Hexachloroethane	ND	20,000	SW846 8270	2/20/92	047013
Indeno(1,2,3-cd)pyrene	ND	20,000	SW846 8270	2/20/92	047013
Isophorone	35,000	20,000	SW846 8270	2/20/92	047013
2-Methylnaphthalene	ND	20,000	SW846 8270	2/20/92	047013
Naphthalene	6,000 <i>J</i>	20,000	SW846 8270	2/20/92	047013
Nitrobenzene	ND	20,000	SW846 8270	2/20/92	047013
2-Nitroaniline	ND	100,000	SW846 8270	2/20/92	047013
3-Nitroaniline	ND	100,000	SW846 8270	2/20/92	047013
4-Nitroaniline	ND	100,000	SW846 8270	2/20/92	047013
N-Nitrosodiphenylamine	ND	20,000	SW846 8270	2/20/92	047013
N-Nitrosodi-n-propylamine	ND <i>UT</i>	20,000	SW846 8270	2/20/92	047013
Phenanthrene	ND	20,000	SW846 8270	2/20/92	047013
<i>Dma 4-2-92</i>					
SURROGATE RECOVERY		%	ACCEPTABLE LIMITS		
Nitrobenzene-d5	61	(23 - 120)			
2-Fluorobiphenyl	67	(30 - 115)			
Terphenyl-d14	99	(18 - 137)			
2-Fluorophenol	43	(25 - 121)			
Phenol-d5	61	(24 - 113)			
2,4,6-Tribromophenol	48	(19 - 122)			

NOTE:

AS RECEIVED

ND (NONE DETECTED)

DETECTED, BUT BELOW QUANTIFICATION LIMITS: ESTIMATED VALUES



ECOLOGY & ENVIRONMENTAL

S6 2-11-92 1705

WO #: 45830114
LAB #: D2B140028-006
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Pyrene	ND	20,000	SW846 8270	2/20/92	047013
1,2,4-Trichlorobenzene	ND	20,000	SW846 8270	2/20/92	047013

SURROGATE RECOVERY%ACCEPTABLE LIMITS

Nitrobenzene-d5	61	(23 - 120)
2-Fluorobiphenyl	67	(30 - 115)
Terphenyl-d14	99	(18 - 137)
2-Fluorophenol	43	(25 - 121)
Phenol-d5	61	(24 - 113)
2,4,6-Tribromophenol	48	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

S6 2-11-92 1705

WO #: 45830114
LAB #: D2B140028-006
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	4 OF 4		METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
	RESULT (ug/kg)	REPORTING LIMIT			
Benzoic acid	ND	100,000	SW846 8270	2/20/92	047013
4-Chloro-3-methylphenol	ND	20,000	SW846 8270	2/20/92	047013
2-Chlorophenol	ND	20,000	SW846 8270	2/20/92	047013
2,4-Dichlorophenol	ND	20,000	SW846 8270	2/20/92	047013
2,4-Dimethylphenol	ND	20,000	SW846 8270	2/20/92	047013
2,4-Dinitrophenol	ND	100,000	SW846 8270	2/20/92	047013
4,6-Dinitro- 2-methylphenol	ND	100,000	SW846 8270	2/20/92	047013
2-Methylphenol	ND	20,000	SW846 8270	2/20/92	047013
4-Methylphenol	ND	20,000	SW846 8270	2/20/92	047013
2-Nitrophenol	ND	20,000	SW846 8270	2/20/92	047013
4-Nitrophenol	ND	100,000	SW846 8270	2/20/92	047013
Pentachlorophenol	ND UT	100,000	SW846 8270	2/20/92	047013
Phenol	ND UT	20,000	SW846 8270	2/20/92	047013
2,4,5-Trichlorophenol	ND	20,000	SW846 8270	2/20/92	047013
2,4,6-Trichlorophenol	ND UT	20,000	SW846 8270	2/20/92	047013

Yma 4-2-92

SURROGATE RECOVERY%ACCEPTABLE LIMITS

Nitrobenzene-d5	61	(23 - 120)
2-Fluorobiphenyl	67	(30 - 115)
Terphenyl-d14	99	(18 - 137)
2-Fluorophenol	43	(25 - 121)
Phenol-d5	61	(24 - 113)
2,4,6-Tribromophenol	48	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

S6 2-11-92 1705

WO #: 45830214
LAB #: D2B140028-006
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Acenaphthylene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Anthracene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Benzo(a)anthracene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Benzo(b)fluoranthene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Benzo(k)fluoranthene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Benzo(ghi)perylene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Benzo(a)pyrene	ND <i>UT</i>	20,000	SW846 8270	3/09- 3/12/92	069061
Benzyl alcohol	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Bis(2-chloroethoxy)methane	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Bis(2-chloroethyl)ether	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Bis(2-chloroisopropyl)ether	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Bis(2-ethylhexyl)phthalate	ND	20,000	SW846 8270	3/09- 3/12/92	069061
4-Bromophenyl phenyl ether	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Butyl benzyl phthalate	ND	20,000	SW846 8270	3/09- 3/12/92	069061
4-Chloroaniline	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2-Chloronaphthalene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
4-Chlorophenyl phenyl ether	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Chrysene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Dibenzo(a,h)anthracene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Dibenzofuran	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Di-n-butyl phthalate	ND	20,000	SW846 8270	3/09- 3/12/92	069061
1,2-Dichlorobenzene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
1,3-Dichlorobenzene	ND	20,000	SW846 8270	3/09- 3/12/92	069061

Dma 4-2-92

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	73	(23 - 120)
2-Fluorobiphenyl	91	(30 - 115)
Terphenyl-d14	106	(18 - 137)
2-Fluorophenol	68	(25 - 121)
Phenol-d5	81	(24 - 113)
2,4,6-Tribromophenol	60	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

S6 2-11-92 1705

WO #: 45830214
LAB #: D2B140028-006
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

3 OF 4

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
3,3-Dichlorobenzidine	ND	40,000	SW846 8270	3/09- 3/12/92	069061
Diethyl phthalate	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Dimethyl phthalate	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2,4-Dinitrotoluene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2,6-Dinitrotoluene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Di-n-octyl phthalate	ND <i>UT</i>	20,000	SW846 8270	3/09- 3/12/92	069061
Fluoranthene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Fluorene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Hexachlorobenzene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Hexachlorobutadiene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Hexachlorocyclopentadiene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Hexachloroethane	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Indeno(1,2,3-cd)pyrene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
Isophorone	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2-Methylnaphthalene	44,000	20,000	SW846 8270	3/09- 3/12/92	069061
Naphthalene	8,600 <i>J</i>	20,000	SW846 8270	3/09- 3/12/92	069061
Nitrobenzene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2-Nitroaniline	ND	100,000	SW846 8270	3/09- 3/12/92	069061
3-Nitroaniline	ND	100,000	SW846 8270	3/09- 3/12/92	069061
4-Nitroaniline	ND	100,000	SW846 8270	3/09- 3/12/92	069061
N-Nitrosodiphenylamine	ND	20,000	SW846 8270	3/09- 3/12/92	069061
N-Nitrosodi-n-propylamine	ND <i>UT</i>	20,000	SW846 8270	3/09- 3/12/92	069061
Phenanthrene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
<u>SURROGATE RECOVERY</u>	<i>gamma</i> %	<i>4-2-92</i> <u>ACCEPTABLE LIMITS</u>			
Nitrobenzene-d5	73	(23 - 120)			
2-Fluorobiphenyl	91	(30 - 115)			
Terphenyl-d14	106	(18 - 137)			
2-Fluorophenol	68	(25 - 121)			
Phenol-d5	81	(24 - 113)			
2,4,6-Tribromophenol	60	(19 - 122)			

NOTE:

AS RECEIVED

ND (NONE DETECTED)

DETECTED, BUT BELOW QUANTIFICATION LIMIT: ESTIMATED VALUE



ECOLOGY & ENVIRONMENTAL

S6 2-11-92 1705

WO #: 45830214
LAB #: D2B140028-006
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

2 OF 4

<u>PARAMETER</u>	<u>RESULT</u> (ug/kg)	<u>REPORTING</u> <u>LIMIT</u>	<u>METHOD</u>	<u>EXTRACTION-</u> <u>ANALYSIS DATE</u>	<u>QC</u> <u>BATCH</u>
Pyrene	ND	20,000	SW846 8270	3/09- 3/12/92	069061
1,2,4-Trichlorobenzene	ND	20,000	SW846 8270	3/09- 3/12/92	069061

SURROGATE RECOVERY%ACCEPTABLE LIMITS

Nitrobenzene-d5	73	(23 - 120)
2-Fluorobiphenyl	91	(30 - 115)
Terphenyl-d14	106	(18 - 137)
2-Fluorophenol	68	(25 - 121)
Phenol-d5	81	(24 - 113)
2,4,6-Tribromophenol	60	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

S6 2-11-92 1705

WO #: 45830214
LAB #: D2B140028-006
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT	REPORTING	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
	(ug/kg)	LIMIT			
Benzoic acid	ND	100,000	SW846 8270	3/09- 3/12/92	069061
4-Chloro-3-methylphenol	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2-Chlorophenol	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2,4-Dichlorophenol	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2,4-Dimethylphenol	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2,4-Dinitrophenol	ND	100,000	SW846 8270	3/09- 3/12/92	069061
4,6-Dinitro- 2-methylphenol	ND	97,000	SW846 8270	3/09- 3/12/92	069061
2-Methylphenol	ND	20,000	SW846 8270	3/09- 3/12/92	069061
4-Methylphenol	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2-Nitrophenol	ND	20,000	SW846 8270	3/09- 3/12/92	069061
4-Nitrophenol	ND	100,000	SW846 8270	3/09- 3/12/92	069061
Pentachlorophenol	ND UT	100,000	SW846 8270	3/09- 3/12/92	069061
Phenol	ND UT	20,000	SW846 8270	3/09- 3/12/92	069061
2,4,5-Trichlorophenol	ND	20,000	SW846 8270	3/09- 3/12/92	069061
2,4,6-Trichlorophenol	ND UT	20,000	SW846 8270	3/09- 3/12/92	069061

Gma 4-2-92

<u>SURROGATE RECOVERY</u>	<u>%</u>	<u>ACCEPTABLE LIMITS</u>
Nitrobenzene-d5	73	(23 - 120)
2-Fluorobiphenyl	91	(30 - 115)
Terphenyl-d14	106	(18 - 137)
2-Fluorophenol	68	(25 - 121)
Phenol-d5	81	(24 - 113)
2,4,6-Tribromophenol	60	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

S7 2-11-92 1630

WO #: 45840115

LAB #: D2B140028-007

MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

1 OF 4

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Acenaphthene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Acenaphthylene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Anthracene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Benzo(a)anthracene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Benzo(b)fluoranthene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Benzo(k)fluoranthene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Benzo(ghi)perylene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Benzo(a)pyrene	ND <i>✓T</i>	20,000	SW846 8270	2/17- 2/20/92	049051
Benzyl alcohol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-chloroethoxy)methane	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-chloroethyl)ether	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-chloroisopropyl)ether	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Bis(2-ethylhexyl)phthalate	ND	20,000	SW846 8270	2/17- 2/20/92	049051
4-Bromophenyl phenyl ether	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Butyl benzyl phthalate	ND	20,000	SW846 8270	2/17- 2/20/92	049051
4-Chloroaniline	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2-Chloronaphthalene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
4-Chlorophenyl phenyl ether	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Chrysene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Dibenzo(a,h)anthracene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Dibenzofuran	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Di-n-butyl phthalate	ND	20,000	SW846 8270	2/17- 2/20/92	049051
1,2-Dichlorobenzene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
1,3-Dichlorobenzene	ND	20,000	SW846 8270	2/17- 2/20/92	049051

Dma 4-2-92
SURROGATE RECOVERY%ACCEPTABLE LIMITS

Nitrobenzene-d5	101	(23 - 120)
2-Fluorobiphenyl	94	(30 - 115)
Terphenyl-d14	149*	(18 - 137)
2-Fluorophenol	86	(25 - 121)
Phenol-d5	86	(24 - 113)
2,4,6-Tribromophenol	88	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

S7 2-11-92 1630

WO #: 45840115
LAB #: D2B140028-007
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
1,4-Dichlorobenzene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
3,3-Dichlorobenzidine	ND	40,000	SW846 8270	2/17- 2/20/92	049051
Diethyl phthalate	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Dimethyl phthalate	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dinitrotoluene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,6-Dinitrotoluene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Di-n-octyl phthalate	4,200 J J	20,000	SW846 8270	2/17- 2/20/92	049051
Fluoranthene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Fluorene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Hexachlorobenzene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Hexachlorobutadiene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Hexachlorocyclopentadiene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Hexachloroethane	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Indeno(1,2,3-cd)pyrene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Isophorone	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2-Methylnaphthalene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Naphthalene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
Nitrobenzene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2-Nitroaniline	ND	100,000	SW846 8270	2/17- 2/20/92	049051
3-Nitroaniline	ND	100,000	SW846 8270	2/17- 2/20/92	049051
4-Nitroaniline	ND	100,000	SW846 8270	2/17- 2/20/92	049051
N-Nitrosodiphenylamine	ND	20,000	SW846 8270	2/17- 2/20/92	049051
N-Nitrosodi-n-propylamine	ND UJ	20,000	SW846 8270	2/17- 2/20/92	049051
Phenanthrene	ND	20,000	SW846 8270	2/17- 2/20/92	049051

Jma 4-2-92

SURROGATE RECOVERY

%

ACCEPTABLE LIMITS

Nitrobenzene-d5	101	(23 - 120)
2-Fluorobiphenyl	94	(30 - 115)
Terphenyl-d14	149*	(18 - 137)
2-Fluorophenol	86	(25 - 121)
Phenol-d5	86	(24 - 113)
2,4,6-Tribromophenol	88	(19 - 122)

NOTE:

AS RECEIVED

ND

(NONE DETECTED)

DETECTED, BUT BELOW QUANTIFICATION LIMIT; ESTIMATED VALUE)



ECOLOGY & ENVIRONMENTAL

S7 2-11-92 1630

WO #: 45840115
LAB #: D2B140028-007
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
		3 OF 4			
Pyrene	ND	20,000	SW846 8270	2/17- 2/20/92	049051
1,2,4-Trichlorobenzene	ND	20,000	SW846 8270	2/17- 2/20/92	049051

SURROGATE RECOVERY%ACCEPTABLE LIMITS

Nitrobenzene-d5	101	(23 - 120)
2-Fluorobiphenyl	94	(30 - 115)
Terphenyl-d14	149*	(18 - 137)
2-Fluorophenol	86	(25 - 121)
Phenol-d5	86	(24 - 113)
2,4,6-Tribromophenol	88	(19 - 122)

NOTE:

AS RECEIVED
ND (NONE DETECTED)



ECOLOGY & ENVIRONMENTAL

S7 2-11-92 1630

WO #: 45840115
LAB #: D2B140028-007
MATRIX: SOLID

DATE RECEIVED: 2/14/92

----- TCL SEMIVOLATILE ORGANICS -----

PARAMETER	RESULT (ug/kg)	REPORTING LIMIT	METHOD	EXTRACTION- ANALYSIS DATE	QC BATCH
Benzoic acid	ND	100,000	SW846 8270	2/17- 2/20/92	049051
4-Chloro-3-methylphenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2-Chlorophenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dichlorophenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dimethylphenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,4-Dinitrophenol	ND	100,000	SW846 8270	2/17- 2/20/92	049051
4,6-Dinitro- 2-methylphenol	ND	100,000	SW846 8270	2/17- 2/20/92	049051
2-Methylphenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
4-Methylphenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2-Nitrophenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
4-Nitrophenol	ND	100,000	SW846 8270	2/17- 2/20/92	049051
Pentachlorophenol	ND UT	100,000	SW846 8270	2/17- 2/20/92	049051
Phenol	ND UT	20,000	SW846 8270	2/17- 2/20/92	049051
2,4,5-Trichlorophenol	ND	20,000	SW846 8270	2/17- 2/20/92	049051
2,4,6-Trichlorophenol	ND UT	20,000	SW846 8270	2/17- 2/20/92	049051

Yma 4-2-92

SURROGATE RECOVERY	%	ACCEPTABLE LIMITS
Nitrobenzene-d5	101	(23 - 120)
2-Fluorobiphenyl	94	(30 - 115)
Terphenyl-d14	149*	(18 - 137)
2-Fluorophenol	86	(25 - 121)
Phenol-d5	86	(24 - 113)
2,4,6-Tribromophenol	88	(19 - 122)

NOTE:

AS RECEIVED

ND (NONE DETECTED)

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: WADSWORTH Contract: 45806114

Lab Code: WADS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) Water Lab Sample ID: 45806114

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 45806114

Level: (low/med) Low Date Received: 2-14-92

% Moisture: not dec. — dec. — Date Extracted: 2-15-92

Extraction: (SepF/Cont/Sonc) Cont Date Analyzed: 2-19-92

GPC Cleanup: (Y/N) N pH: — Dilution Factor: 1.0

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	<u>Unknown dimethylbenzene isomer</u>	<u>4.33</u>	<u>65 JN</u>	<u>Yma</u>
2.	<u>Unknown dimethylbenzene isomer</u>	<u>4.72</u>	<u>55 JN</u>	<u>4-292</u>
3. <u>144-19-4</u>	<u>2,2,4-trimethyl-2,3-pentanedione</u>	<u>8.70</u>	<u>230 JN</u>	
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000325

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: WADSWORTH Contract: _____

Lab Code: WADS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 45788114

Sample wt/vol: 30 (g/mL) g Lab File ID: 45788120

Level: (low/med) Low Date Received: 2-14-92

% Moisture: not dec. _____ dec. _____ Date Extracted: 2-16-92

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 2-27-92

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 20

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. <u>88-99-3</u>	<u>1,2-benzenedicarboxylic acid</u>	<u>12.23</u>	<u>260,000 JN</u>	<u>Gm/g</u>
2.	<u>Unknown</u>	<u>17.05</u>	<u>60,000</u>	<u>4-2-92</u>
3.	<u>Unknown</u>	<u>21.14</u>	<u>2,000,000</u>	
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000350

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: WADSWORTH Contract: 45789114

Lab Code: WADS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) Soil Lab Sample ID: 45789114

Sample wt/vol: 1 (g/mL) g Lab File ID: 45789

Level: (low/med) med Date Received: 2-14-92

% Moisture: not dec. dec. Date Extracted: 2-17-92

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 2-20-92

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1 ^{3-13-92 ml}

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	15.53	140.000	
2.	Unknown	18.75	110.000	
3.	Unknown	19.37	110.000	
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000657

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

45815114

Lab Name: WADSWORTH Contract: _____

Lab Code: WADS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 45815114

Sample wt/vol: 1 (g/mL) g Lab File ID: 45815

Level: (low/med) med Data Received: 2-14-92

% Moisture: not dec. — dec. — Data Extracted: 2-17-92

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 2-20-92

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 84 ³⁻¹³⁻⁹²

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown ethyl-methylhexane isomer	5.75	1,200,000.00	5/2/92
2.	Unknown trimethylhexane isomer	6.30	2,800,000.00	4-2-92
3.	Unknown phthalate	24.97	1,600,000.00	
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000385

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: WADSWORTH Contract: 45822/14

Lab Code: WADS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) Soil Lab Sample ID: 45822/14

Sample wt/vol: 30 (g/mL) g Lab File ID: 45822

Level: (low/med) Low Date Received: 2-14-92

% Moisture: not dec. dec. Date Extracted: 2-16-92

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 2-20-92

GPC Cleanup: (Y/N) N pH: Dilution Factor: mw 2-12-92 50/100 2

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 88-99-3	1,2-benzenedicarboxylic acid	10.75	810 JN	Yma
2.	Unknown Hydrocarbon	15.27	470 JN	
3.	Unknown Hydrocarbon	16.33	540 JN	
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000423

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: WADSWORTH Contract: 45830214

Lab Code: WADS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) Soil Lab Sample ID: 45830214

Sample wt/vol: 1 (g/mL) g Lab File ID: 45830214A

Level: (low/med) med Date Received: 2-14-92

% Moisture: not dec. dec. Date Extracted: 3-9-92

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 3-11-92

GPC Cleanup: (Y/N) N pH: Dilution Factor: 21 ^{3-13-92mu}

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown dimethyl benzene isomer	3.73	1,300,000 JN	Dma
2.	Unknown dimethyl benzene isomer	5.62	440,000 JN	4-2-92
3.	Unknown trimethyl benzene isomer	6.40	600,000 JN	
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000440

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

45840114

Lab Name: WADSWORTH Contract: _____

Lab Code: WAD Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 45840114

Sample wt/vol: 1 (g/mL) g Lab File ID: 45840

Level: (low/med) med Date Received: 2-14-92

% Moisture: not dec. — dec. — Date Extracted: 2-17-92

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 2-20-92

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 21 ^{3-13-92 mu}

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. <u>86-99-3</u>	<u>1,2-benzenedicarboxylic acid</u>	<u>10.77</u>	<u>62.000 JN</u>	<u>2/mic</u>
2. <u> </u>	<u>Unknown</u>	<u>19.35</u>	<u>1.900000 JN</u>	<u>4-2-9</u>
3. <u> </u>	<u>Unknown phthalate</u>	<u>24.98</u>	<u>1.600000 JN</u>	
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000458

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

460.26101

Lab Name: WARDWORTH Contract: _____

Lab Code: WARD Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Water Lab Sample ID: 460.26101

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 460.26101

Level: (low/med) Low Data Received: _____

% Moisture: not dec. _____ dec. _____ Data Extracted: 2-15-92

Extraction: (SepF/Cont/Sonc) Cont Date Analyzed: 2-17-92

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

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000475

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: WADSWORTH Contract: 46093101

Lab Code: WADS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 46093101

Sample wt/vol: 30 (g/mL) g Lab File ID: 46093101

Level: (low/med) Low Data Received: _____

% Moisture: not dec. 0 dec. _____ Data Extracted: 2-16-92

Extraction: (SepF/Cont/Sonc) Sonc Data Analyzed: 2-20-92

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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30.				

000484

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: WADSWORTH Contract: 46436101

Lab Code: WADS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) Soil Lab Sample ID: 46436101

Sample wt/vol: 1 (g/mL) g Lab File ID: 46436

Level: (low/med) med Data Received:

% Moisture: not dec. dec. Date Extracted: 2-17-92

Extraction: (SepF/Cont/Sonc) Sonc Date Analyzed: 2-20-92

GPC Cleanup: (Y/N) N pH: Dilution Factor: 2 mo 3-13-92

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

500.37101

Lab Name: WADSWORTH Contract: _____

Lab Code: WADS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) Soil Lab Sample ID: 500.37101

Sample wt/vol: 1 (g/mL) g Lab File ID: 500.37101

Level: (low/med) med Data Received: _____

% Moisture: not dec. _____ dec. _____ Data Extracted: 3-9-92

Extraction: (SepF/Cont/Sonc) Sonc Data Analyzed: 3-10-92

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 21 ^{3-13-92 mu}

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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